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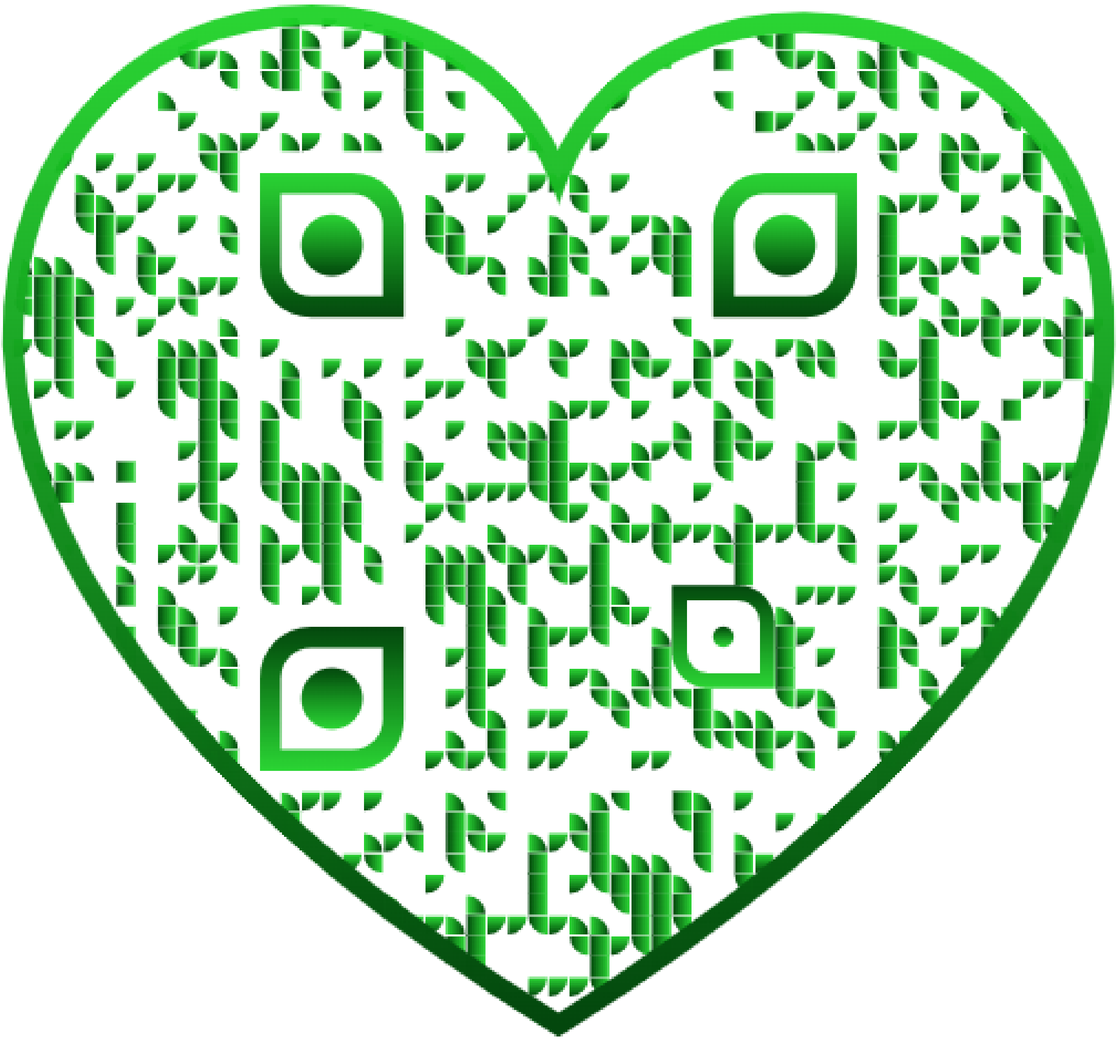

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EDITORIAL
Content director Chris Batesmith
Digial features editor Sander Tel
Editorial assistants Scarlett Deamer, Amandine Lefevre
Designer Justin Marshall
Content & marketing assistant
Lucy Keech

Tel: 020 3627 3240
Web: www.self-build.co.uk

ADVERTISING
Sales director
Nick Gillam 020 3627 3245
Account manager
Jamie Welsh 020 3553 2376
Account executive
David Farrugia 020 3627 3251
Sales & advertising administrator
Joanna Mitton 020 3627 3248

PUBLISHING
Managing director Calum Taylor
Finance director Katherine Taylor
Marketing director Claire Drakeford
Accounts Ellis Hambrecht 020 3627 3253

EXHIBITIONS
Business development director
Sarah Nesbitt-Hawes 020 3627 3247
Account manager
Maria Varela 020 3627 3254

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Cover home: Ecologic SIPs (page 32)

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Above: Closed panel timber frame elements being assembled and quality-checked in the Dan-Wood factory, prior to delivery to site

AN INTRODUCTION TO

BUILDING WITH STRUCTURAL TIMBER

We speak to STA members to reveal the benefits of timber systems, and the core building methods that can support your bespoke home goals

Structural timber construction methods offer a fantastic platform for a high-quality, efficient home that's completed on time and on budget – so, it's little wonder that offsite solutions are hugely popular with self builders.

These systems are manufactured in quality-controlled factories, meaning your home's structure is engineered and fabricated to exacting specifications. This makes the whole process more accurate and predictable on your site than, say, a traditional brick and block build.

Speed of delivery, guaranteed build schedules and pre-arranged costs are just a few of the key benefits of offsite manufacture. Partnering with a single company to deliver the structural shell of your new home can give you greater confidence in your investment, as you've got a clear point of responsibility and far fewer moving parts to coordinate.

If you're interested in an offsite solution, the first step is to engage with potential suppliers, so they can help you and your design team understand their systems' benefits, how they would fit your project profile and what opportunities might exist for maximising your build's potential. See **page 11** for advice on what to consider when appointing a project partner and **page 46** for a directory of Structural Timber Association (STA) accredited members.

TIMBER BUILD SYSTEMS

There are three principal types of structural timber building method, each of which we'll be exploring in more depth throughout this guide. The prime options in the UK are:

Timber frame: Available in a variety of formats, from open-panel types that require a bit more input on site, through to pre-insulated closed-panel solutions that might even come with factory-installed windows, service channels and internal/external claddings already in place. Discover the ins-and-outs of timber frame on **page 14**.

Structural insulated panels: Known as SIPs, these pre-insulated panels can be used to build walls, floors and roofs, and are also often specified as a thermal wraparound for other systems (such as oak frame). With SIPs, the internal studwork has been engineered out to provide continuous insulation, minimising thermal bridging. Find out more about SIPs on **page 26**.

Oak frame: If you want character and beauty built into your home, a post-and-beam method like oak frame is the way to go. You'll have choice about the amount and style of beamwork on show, as well as insulating encapsulation options, to deliver on your architectural expectations, performance goals and budget. Learn more about oak frame on **page 36**.

All three of these options could be a great fit for your project profile. Of course, there's plenty more nuance beyond the basic construction type – with different suppliers offering their own twist on the system. The key is to engage with potential providers early on in the planning process, so that the house design can be developed to maximise the advantages of your preferred building system.

Of course, timber also goes into many other types of build – forming the floor and roof structures, for instance. It's also used throughout the fit-out of a house, for everything from external cladding to doors, windows, stud walls, architectural mouldings and more. Many offsite manufacturers can offer follow-on joinery as part of their service or put you in touch with potential suppliers.

Above: Built with the Glosford SIPs system, this stylish, high-performance home demonstrates some of the design advantages of structural insulated panels – such as simplified delivery of vaulted ceilings and wide spans

Below: Characterful exposed timbers and beautifully framed views are among the coveted features oak framing can offer – as in this Build It Award-winning Oakwrights project, designed by Pete Tonks of PJT Design

MARK WATTS

5 BENEFITS OF STRUCTURAL TIMBER

Systems like timber frame, SIPs and oak frame offer a raft of advantages. They're familiar and well understood by contractors and trades, for instance; offer architectural freedom in terms of aesthetics, layouts and spans; and it's straightforward to make them efficient and airtight. Manufactured with responsibly-sourced wood, they offer strong sustainability credentials, too – with the potential to further boost this through your onward specification decisions. Here, five STA Members shine a light on five key reasons you should consider offsite-manufactured timber systems for your build:

1 GUARANTEED QUALITY

Jay Hubbard,
English Brothers

"A timber home is made in quality-controlled conditions, with numerous procedures in place along the way to ensure a high-quality product. Precise requirements are introduced right from the design stage, which helps to minimise errors and inconsistencies versus site-based methods.

By adhering to strict standards, timber system manufacturers can consistently deliver high-quality frames that fit together seamlessly on site, which will in turn reduce construction time and costs.

The factory environment also allows for the use of technologies that improve thermal performance, moisture resistance, energy efficiency and airtightness. This ensures clients receive a modern, high-performance building envelope that provides long-term energy savings and reduced maintenance."

2 SPEED OF CONSTRUCTION

Barbara Massie,
Kirkwood Timber Frame

"Time is of the essence when designing and building a new home. Self building with a precision-engineered structural timber system that's manufactured offsite can save you considerable time at the build phase – some house shells can potentially be erected within a day! Tolerances are exact and there's no delay to construction, as inclement weather will not impact the home's manufacture on or offsite.

Through reducing construction times by up to eight weeks in comparison to other on site build systems, cutting waste and reducing the labour needed to create your dream property, choosing timber frame is guaranteed to cut timescales and costs.

At Kirkwood, we manufacture our frames in a semi-automated factory, and we're one of only a handful of suppliers in the UK to have the capability to produce up to 12m-long wall panels, which means fewer panel junctions, enhanced airtightness, less waste and the ability to deliver quicker build times once the timber structure is on site."

Above: This picturesque stone-clad property, located just south of Edinburgh, was built by Fleming Homes. The project combines high-performance timber frame with a wow-factor oak-and-glass living space. The company offers a free in-house design service as part of its package

3 DESIGN FLEXIBILITY

Simon Orrells,

Frame Technologies

"Timber construction offers unbeatable design freedom to suit different budgets and meet the requirements of even the trickiest building plots. With a wide range of innovative products and cladding solutions, modern timber systems deliver warm, cosy and beautiful buildings, allowing self builders to realise their dream home however simple or elaborate their plans may be.

Early involvement is key to a successful scheme that matches up with your budget – so do get in touch with your timber frame supplier as early on in your project as possible. They can assist with design challenges and work with your architect to turn your dream into a reality. We've worked on many projects over the years with clients who have been told by other companies that certain design features can't be included, and we've come up with a workable solution using structural timber. My motto is, 'if it can be drawn, it can be built!'. The only limit is your imagination."

4 COST & SCHEDULING CERTAINTY

David Coleman,

Timber Innovations

"Offsite construction minimises delays caused by weather or other on site issues, meaning that your project can follow a far more predictable timeline. As a result, arranging finance becomes simpler, as lenders have confidence in your schedule.

The efficiency of offsite construction also translates to lower labour costs and reduced waste, further enhancing cost-effectiveness. By choosing an offsite-manufactured timber system, self builders can achieve high-quality results, faster project completion, and more accurate budgeting, making the entire process smoother and more financially manageable.

5 PERFORMANCE & EFFICIENCY

Lee Broomhall,

MBC Timber Frame

"Huge amounts of the construction work are done in a factory environment, using some of the best modern machinery and processes. So, the thermal properties and U-values of your timber home can reach the highest efficiency standards and achieve accreditations such as Passivhaus.

Having your home's insulation fitted in the factory will guarantee a high-performance, thermally efficient structure out of the box. This will allow you to maximise passive heat sources, such as solar gain and mechanical ventilation and heat recovery (MVHR), meaning you can install tech such as air/ground source heat pumps and benefit from lowered heating bills all year round."

WHAT IS THE STRUCTURAL TIMBER ASSOCIATION?

The Structural Timber Association (STA)'s mission is to raise the bar for sustainability, quality and technical excellence in the structural timber sector, and to help self builders and homeowners identify the best systems and solutions for their projects. It operates a quality assurance scheme, STA Assure, enabling you to appoint trusted partners with confidence. See page 11 for more advice on choosing a build partner. The STA's website contains a wealth of information for self builders, from inspiring case studies through to useful guides on designing, erecting and living with a structural timber home – including a new Self Build Starter Pack (scan the QR code to access). Through the site, you can also enquire with STA Assure members who can help realise your bespoke home (turn to page 46 for a directory of STA members). **For more advice visit www.structuraltimber.co.uk**

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Location East Sussex

Type of Project Self build

System Timber frame

House size 130m^2

Package type Construction design, manufacture & assembly of MBC Passive foundation, wall & roof system

Above: The MBC Passive system achieves U-values of 0.11 W/m^{2}K for the ground slab, 0.12 W/m^{2}k for the walls, and 0.1 W/m^{2}K for the roof. It also simplifies airtightness detailing, which is critical to the Passivhaus methodology. This project achieved an airtightness test result of 0.5ach@50Pa

Above right: To avoid overheating, the west-facing, quadruple-glazed Internorm windows – supplied and installed by Ecohaus Windows & Doors – have integral louvred blinds. The glazed door features an external blind

CASE STUDY

PASSIVHAUS PERFORMANCE FOR A STYLISH RURAL HOME

Brook Lodge is a Passivhaus-certified, brick and cedar shingle-clad new dwelling. The scheme was project managed by self builder Carolyn and driven by her passion for realising a stylish, environmentally conscious home.

The original architect's concept wasn't optimised for energy efficiency. It was then picked up and adapted for Passivhaus by Mark Elton – initially at Cowan Architects and latterly at his own practice, Awen Design. At an early stage, MBC Timber Frame was appointed to engineer and manufacture the superstructure.

Mark and the MBC team collaborated to rationalise and slightly enlarge the footprint. This has enabled the building to meet the Passivhaus target, despite being oriented predominantly west-northwest to take best advantage of the countryside views. "Every member of the MBC design team holds a certified Passivhaus Designer qualification," says Lee Broomhall, sales director at MBC Timber Frame. "This collective expertise enables us to proactively identify and recommend enhancements.

The house shell comprises MBC's Passive twin-stud timber frame system, featuring 300mm of blown cellulose insulation in the walls, increasing to 400mm in the roof. This is set atop MBC's 300mm-thick insulated raft foundation. Recent developments in the system include the integration of specialist thermal pads to address cold bridging in steelwork, and new best practices for establishing continuous internal airtightness lines.

The house is heated with a Samsung air source heat pump, calibrated to external temperatures to deliver ideal background heat for consistent comfort levels. This is complemented by a mechanical ventilation and heat recovery (MVHR) system from 21 Degrees. Roof integrated solar PV is used to heat the hot water cylinder, and is also hooked up to a home battery system.

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FINDING YOUR PROJECT PARTNER

Engaging the right experts early in the build journey is key. Here's how Structural Timber Association members can help you on the path to success

Above: Your structural timber package will typically include the walls, floors, roof structure and internal load bearing partitions. Pictured here is a project by Frame Technologies at roof truss install stage

Choosing a quality structural timber supplier is one of the most important steps to turning your dream home ideas into a reality. Remember, if you want to maximise your build's potential, it's best to engage with potential partners in the early planning stages, so they can best support you in developing a high-quality design and realising it on site. So, what do you need to know to find the right structural timber supplier for your self build?

WHERE TO START

Your project profile – the design, site conditions, planning stipulations and more – will help determine which build system (or mix of systems) will be the best fit. You could engage an architect to help navigate the initial steps. Alternatively, many structural timber suppliers have in-house design teams and planning consultants who can take you through this part of the process, as part of a design and build package. Use the STA's catalogue of STA Assure members to find suppliers based on your chosen build system and the level of service you require.

Visit show homes, factories, workshops and open-house events to get your search underway and discover what different suppliers can offer. "Our show homes provide the perfect opportunity for people to pick up design and build insights and gain a real-life feel for a timber frame home," says Helen Turner, director at Turner Timber Frames. Meeting experts in-person means you can ask questions about your specific project, budget and any limitations they can help you overcome. "Meeting face-to-face also demonstrates your commitment to the project, leading to better service, communication, pricing and overall project outcomes," says Ollie Mason, technical sales manager at Harmony Timber Frame.

Self build shows, such as Build It Live (www.builditlive.co.uk), provide the perfect opportunity to meet a wide range of different timber home suppliers all under one roof. This is your chance to engage in initial, no-obligation conversations with different companies about your plans and find out what they can offer your project. These early meetings will help you build a clearer picture of what you do and don't want out of your self build, how hands-on you wish to be throughout the process and what you're able to create within your budget.

WHY IS IT IMPORTANT TO DO THIS EARLY ON?

Engaging a timber supplier as soon as possible is vital to the success of your self build. Bringing them on board for the design process – ideally before securing planning permission – means they can accommodate feedback from any pre-application meetings

Above: Designed by Trace Architects (tracearchitects.com), this project was ideal for Hemsec's (hemsec.co.uk) SIPs system, which enabled stylish features such as the vaulted ceiling and wide glazed spans. The inner face of the SIPs panels has been left exposed in some locations for a modern yet rustic finish

QUESTIONS TO ASK YOUR STRUCTURAL TIMBER PROVIDER

- Are you an STA Assure member?
- When should I involve you in my home design process?
- What factory quality controls do you have?
- What insulation comes as standard?
- How do you help with airtightness and energy performance?
- Can I see proof of fire reaction and resistance performance?
- Will you install the frame or recommend trusted, STA-assured installers?
- What support can I expect once the timber structure is complete?

with the planners, directly address your project brief and enhance your final design before it's sent to the factory for fabrication.

"Bringing your timber frame supplier into the process early enables the design and engineering team to work closely with the client, architect and builder, so everyone's on the same page from the outset. This this can cut weeks off the build programme," says Helen. Leaving this too late could bring unexpected challenges. "We often receive drawings that have already been granted planning permission, which means it's difficult to help clients save money and value-engineer their design," says Keith Cordukes, director at Lakeland Timber Frame.

Engaging with providers early gives you a clearer picture of build costs and what's included in the structural timber package. This will help you budget more effectively, giving you ample time to develop a fully-costed design that delivers the functionality and wow factor you want at a price you can afford. Plus, it enables you to have informed conversations with lenders while your home's design is being developed (see **page 25** for guidance on financing a timber build).

HOW CAN STA ASSURE HELP?

Choosing an STA member is a smart move, as it ensures your house shell is precision-engineered and built in a quality-controlled environment, where each component is checked before leaving the factory. This makes for a better, more sustainable home that's quicker to build on site – with no risk of weather damage or delays.

STA Assure is the UK's leading quality standard for structural timber buildings, and a great place to start when selecting your project partner. There are Bronze, Silver and Gold levels, highlighting suppliers' quality procedures, management systems and product performance. You can find an STA Assure member by browsing the Structural Timber Association's directory (**www.structuraltimber.co.uk/members**).

As part of the scheme, members are independently checked and recognised for meeting important industry standards. This thorough vetting process helps guarantee that the design, manufacture and on-site assembly of timber homes meets your expectations for a consistent, high level of build quality. STA Assure is trusted by all the main warranty providers, protecting your investment and giving you confidence that your build is in safe and skilled hands.

STA ASSURE

FIND AN STA ASSURE MEMBER

Turn to the directory on **pages 46-50** to find STA Assure members that are ready to help you move your self build project forward today »

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TIMBER FRAME

Discover the key benefits of timber frame construction and what you need to know when planning your project

Above: This cutting-edge new home in Cambridgeshire was built into a sloping, south-facing plot, which called for a split-level design – realised with an offsite-manufactured timber frame from English Brothers

Hugely popular among self builders, timber frame offers many benefits for your project – including super-fast build speeds, excellent design versatility and competitive costs. Another major advantage of these systems is the high level of insulation and excellent airtightness afforded by standard timber frame detailing. “Timber is also sustainable, as it’s the only zero carbon, non-toxic mainstream building material,” says Matthew Vincent, director at Daniels & Vincent. “It creates less CO2 to build with timber frame compared to other mainstream construction methods.”

If you’re new to the world of self building, working with a timber frame supplier will also give you a single point of contact during the main structural phase of your project, relieving some of the complexity. “You have one company delivering as much as possible, which gives you more control and fewer overlaps in trades, where things can be missed,” says Simon Orrells, managing director at Frame Technologies.

WHAT GOES INTO A TIMBER FRAME?

Modern timber frames are engineered as bespoke house shell kits. A standard package might consist of the insulated panel kit (the walling) and all the structural components: floor structure, deck, internal walls, roof structure and glulam/steel beams. Basically, everything you need for a watertight house shell. “Systems like timber frame, SIPs and oak frame aren’t just four walls and a roof. They’re a complete engineered solution at a fixed cost and by one supplier,” says Simon.

Exactly what’s provided will vary between suppliers, however, so you should always interrogate quotes to fully understand what you’re getting. “Timber frame packages can be as basic as a factory-manufactured uninsulated structural kit, right up to a structural system that includes factory-fitted insulation, additional layers of insulation to be added on site, external joinery items, plus follow-on materials such as plasterboard and internal joinery," says Sarah Mathieson, managing director at Fleming Homes.

There are two main types of timber frame system to choose from. In both cases, the engineered panels are formed of a network of studs, rails and sheathing to encase the insulation. The key difference is the level of prefabrication involved.

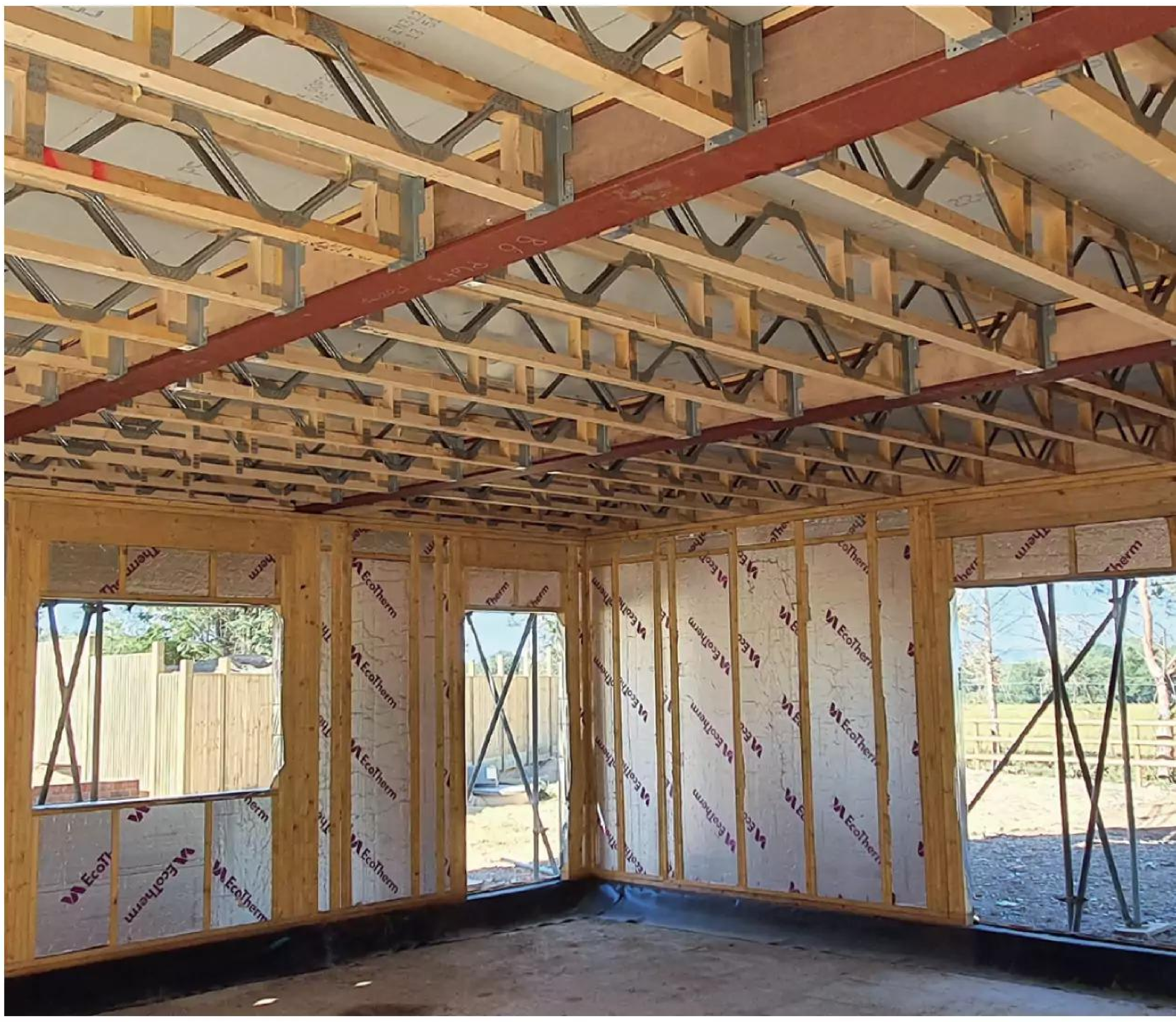
Open panel systems are, as the name suggests, left open on the external face. The insulation you've specified is then fitted on site, before the panel is enclosed with plasterboard. "This type of frame suits someone who wants to do as much as they can on site, such as insulating the walls," says Jay Hubbard, managing director at English Brothers. It's lower cost up front but requires additional time and labour on site.

Closed panel systems, which come with a layer of insulation accurately pre-fitted into the wall panels, have become the standard in the UK. This gives you factory assurance over build quality and insulation coverage, giving you greater confidence that the as-designed energy performance will be realised on site, and makes for an even quicker build phase. "Closed panel timber frames usually come with a vapour control layer and vertical timber battens, creating a cavity for services to be installed into." Some suppliers take this to the ultimate level by providing panels with external claddings, windows and other follow-on items already installed.

DESIGN & MANUFACTURE

Panelised timber construction is a highly versatile building method, capable of achieving pretty much any design you might imagine (planning allowing). Whether you're using an architect or engaging a timber framer's in-house design team, early engagement with the manufacturer is key. This way, your dream home can be developed in way that maximises the benefits of the company's timber frame system – and there won't be any expensive surprises as the scheme goes from planning design to technical drawings.

Once the design is finalised and the engineering completed, the schematics will be sent to the factory so the individual building components can be manufactured. The lead time from pressing the green button to the kit being delivered to site is typically around 10-12 weeks. But lead time doesn't mean down time: you'll still be beavering away in the background, firming up your build schedule and fleshing out as many of the final fit-out details as you can.



Above: A Harmony Timber Frame project in construction, approaching weathertight stage. The superstructure features metal web floor joists – a common choice on timber builds to enable easy installation of services

During manufacture, your site operatives can also progress the groundworks and foundations. On any type of timber build, these must be completed to tight tolerances – which will be checked before the house shell is assembled. "A standard trench footing is normally all that's required," says Matthew Vincent. "Timber frame is generally lighter than other construction methods, with slimmer walls, so you often won't need as much concrete in the foundations."

SHELL ASSEMBLY & FOLLOW-ON WORKS

Once the structural kit is delivered, a typical timber frame house shell might be erected to wind and watertight stage in as little as one or two weeks – protecting your project

KATY DONALDSON

Above: This home features a Scotframe timber frame shell, which reached weathertight on site in under a week

programme against the UK's variable weather. This is an exciting part of the self build experience, as your project rapidly develops from drawings into a recognisable house in front of your eyes.

Many manufacturers offer a supply-and-install service for their frames, either via in-house teams or recommended partners, but you may also be able to use your own contractor. Depending on the system and your performance objectives, an additional layer of internal or external insulation might be applied (typically by the frame install team). First fix trades can then get on with the follow-on works inside the house, in tandem with the external claddings.

Many self builders will leave these elements in the hands of experienced contractors. "If you do want to be hands-on, once the frame is watertight there are lots of opportunities to get involved," says Darren Jarman, managing director at Lowfield Timber Frames. "You could undertake tasks such as insulating, airtightness taping and plasterboarding."

WHAT DOES A TIMBER FRAME HOME COST?

Timber framing is a cost-effective option for many projects. What's more, it offers clear budgeting benefits, as the price and extent of the package is agreed up front. Exactly what that price is will depend on the complexity of the project and the performance spec – do you want to use natural insulation, for instance, or attain Passivhaus certification? Design factors such as large open-plan layouts, meanwhile, will require big joist spans. Of course, these considerations would affect the price whatever the build method.

"A typical insulated timber frame might account for around 18%-20% of your total project budget," suggests Mark Stevenson, Build It Live expert and director at Elsworth Projects. On a typical self build budget of around £2,500-£3,000 per m^2 of floor space, the frame might therefore account for about £450-£700 per m^2. Ultimately, the best way to understand the potential cost of your timber frame is to call in quotes and ensure you're comparing them like-with-like in terms of performance and delivery. One important detail to check is whether the quote includes structural steelwork. "This is key and can be an expensive surprise if you find it's not included," says Simon.

EXPERT VIEW

Maximising sustainability & performance

David Coleman

Business development director, Timber Innovations

"The beauty of timber frame is that it's a flexible building system. We might start off with a standard 140mm stud, with a given insulation in it, but we can easily change things if you want to achieve a better U-value or if you would prefer to use a natural material, such as wood fibre, sheep's wool or recycled newspaper (cellulose).

If you're keen to take a sustainable, fabric first approach to your project, the timber frames of 2025 are really high-performing solutions. We're seeing more people opt for our twin-wall Larsen system, for instance, where two stud walls are held together with a timber gusset, significantly reducing thermal bridging. It's all about spending money in the right areas: namely a quality walling system and good airtightness. Yes, there's a premium for a twin-wall system – maybe 20% on the wall cost – but the extra saving from the enhanced thermal efficiency of your home for the next 30+ years means it's almost a false economy not to do it.

There are so many benefits of timber frame, from saving time and money on site, through to flexibility in design – using roof cassette panels to achieve vaulted ceilings, for example. Plus, it's the most carbon neutral building material available. And the cost security it offers, as a complete package, gives you confidence in delivering your project on budget."

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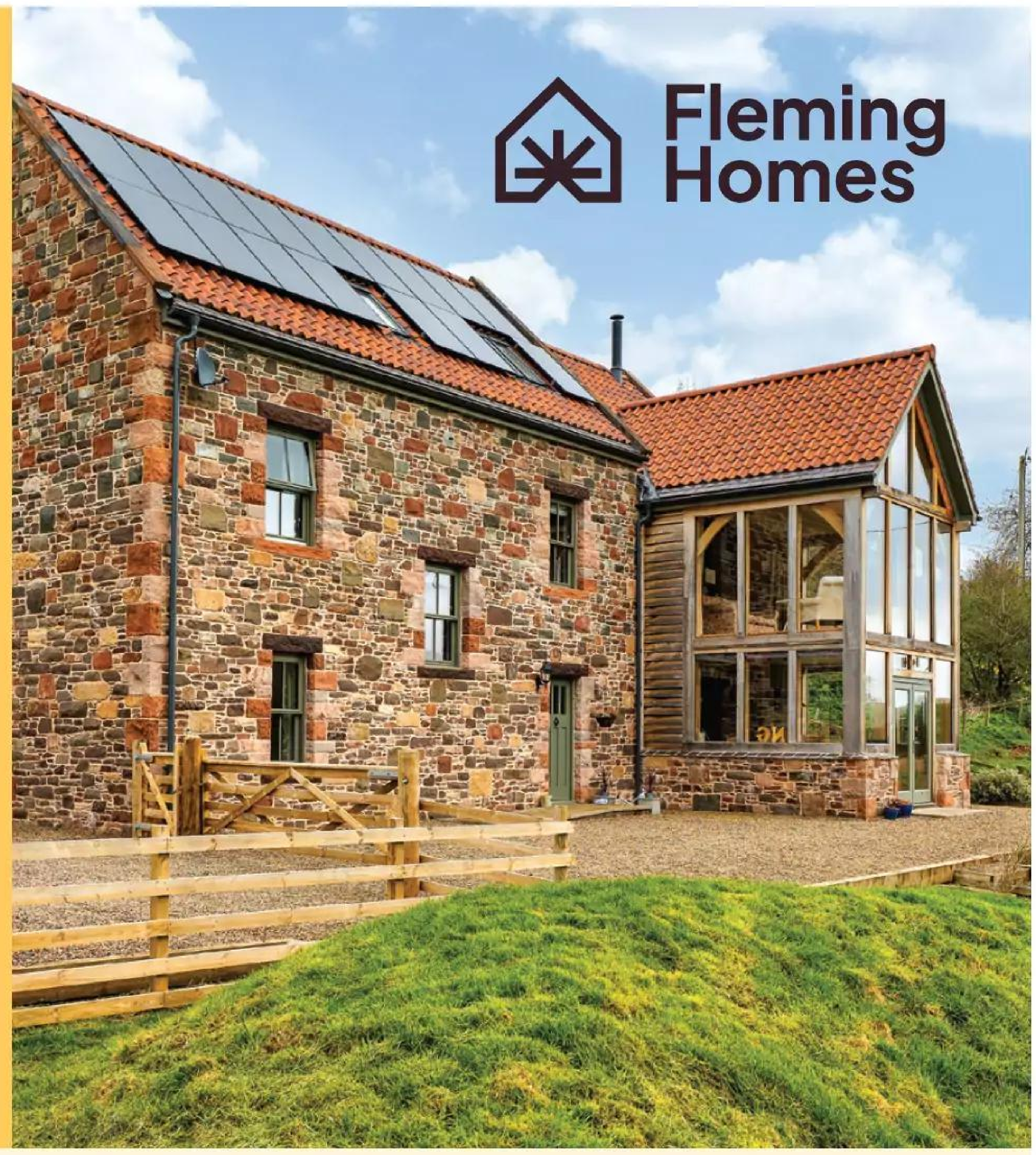

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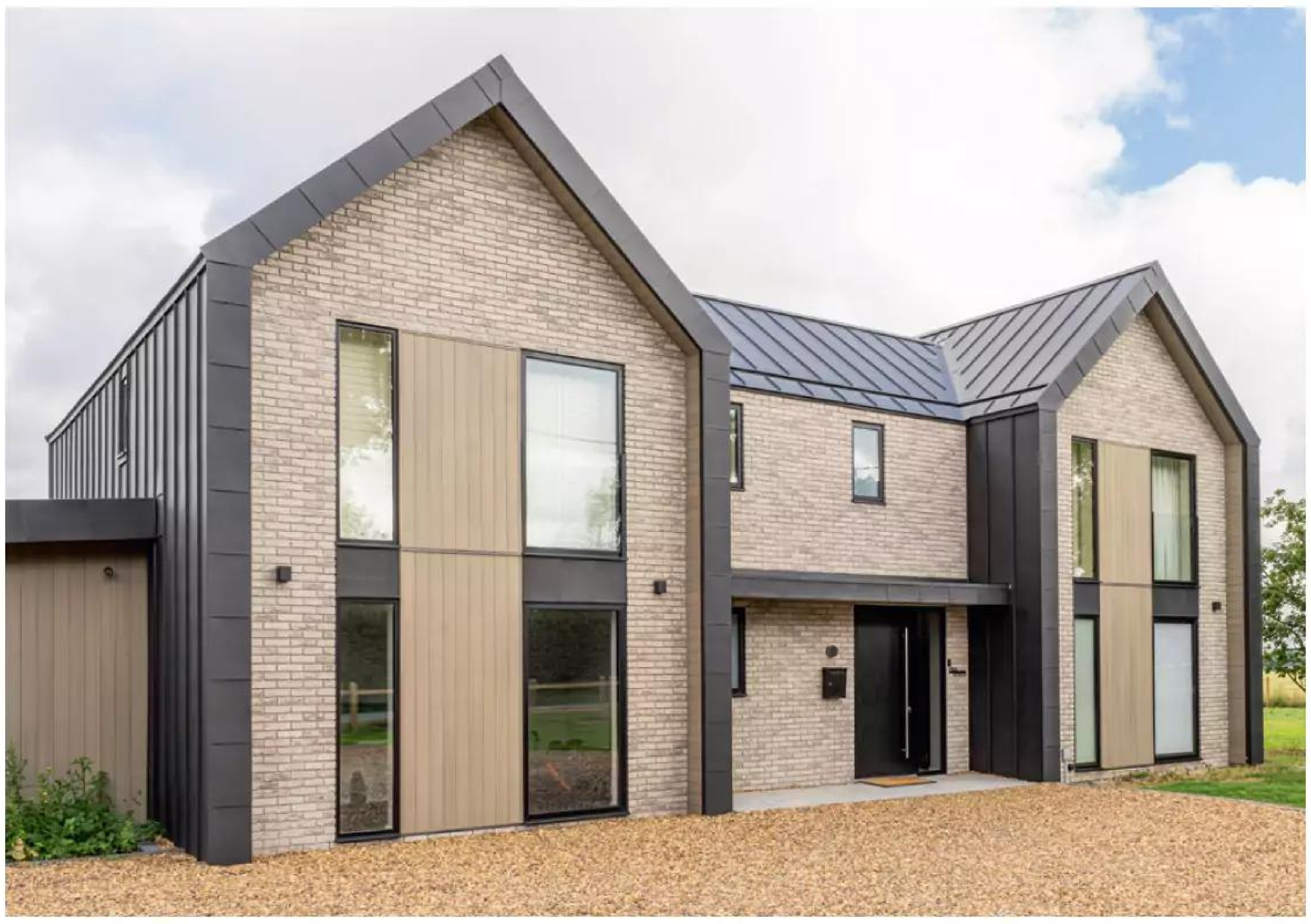
DESIGN IDEAS

AMAZING TIMBER FRAME HOMES

Find inspiration for your project in this selection of stunning timber frame builds

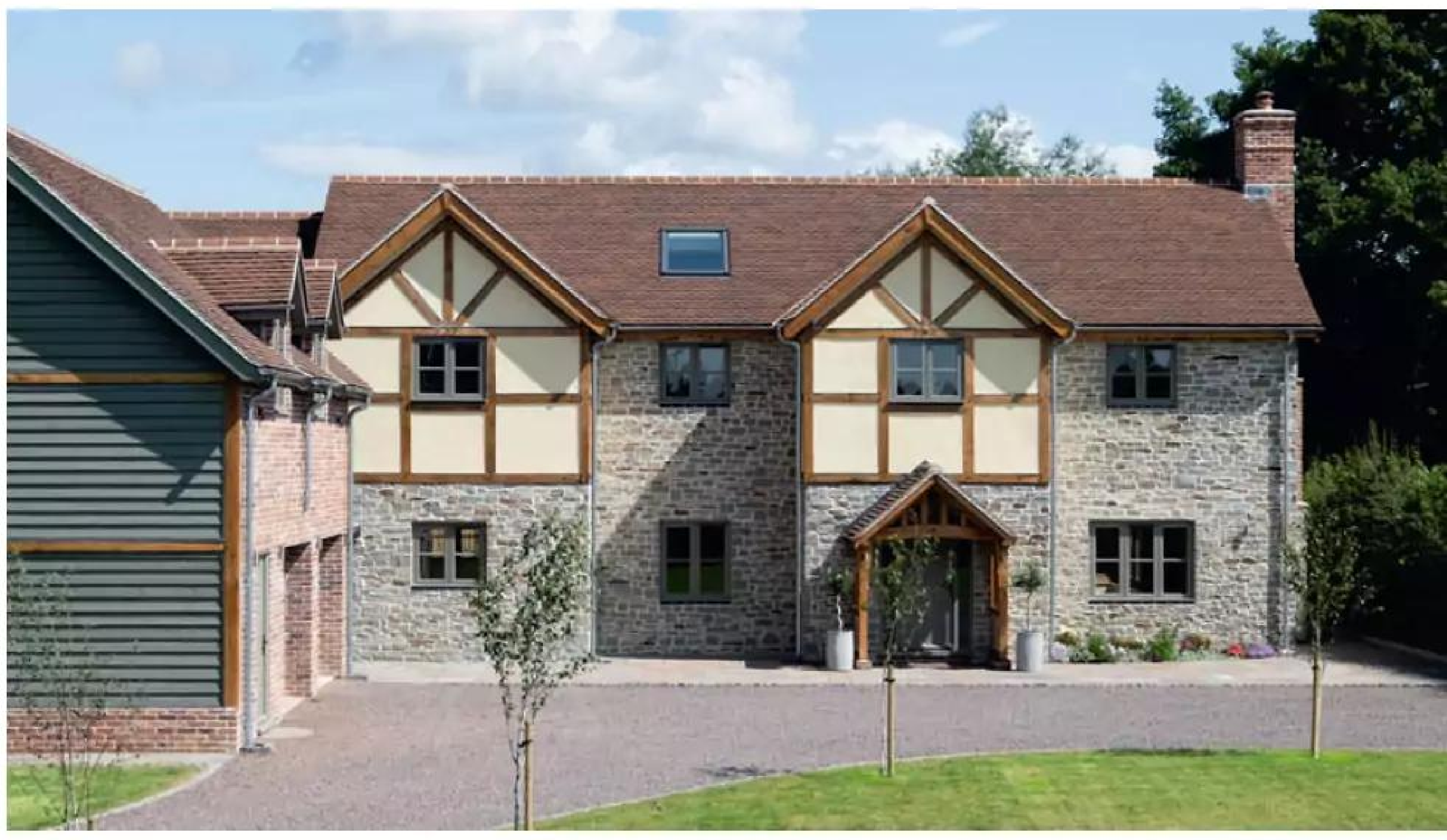


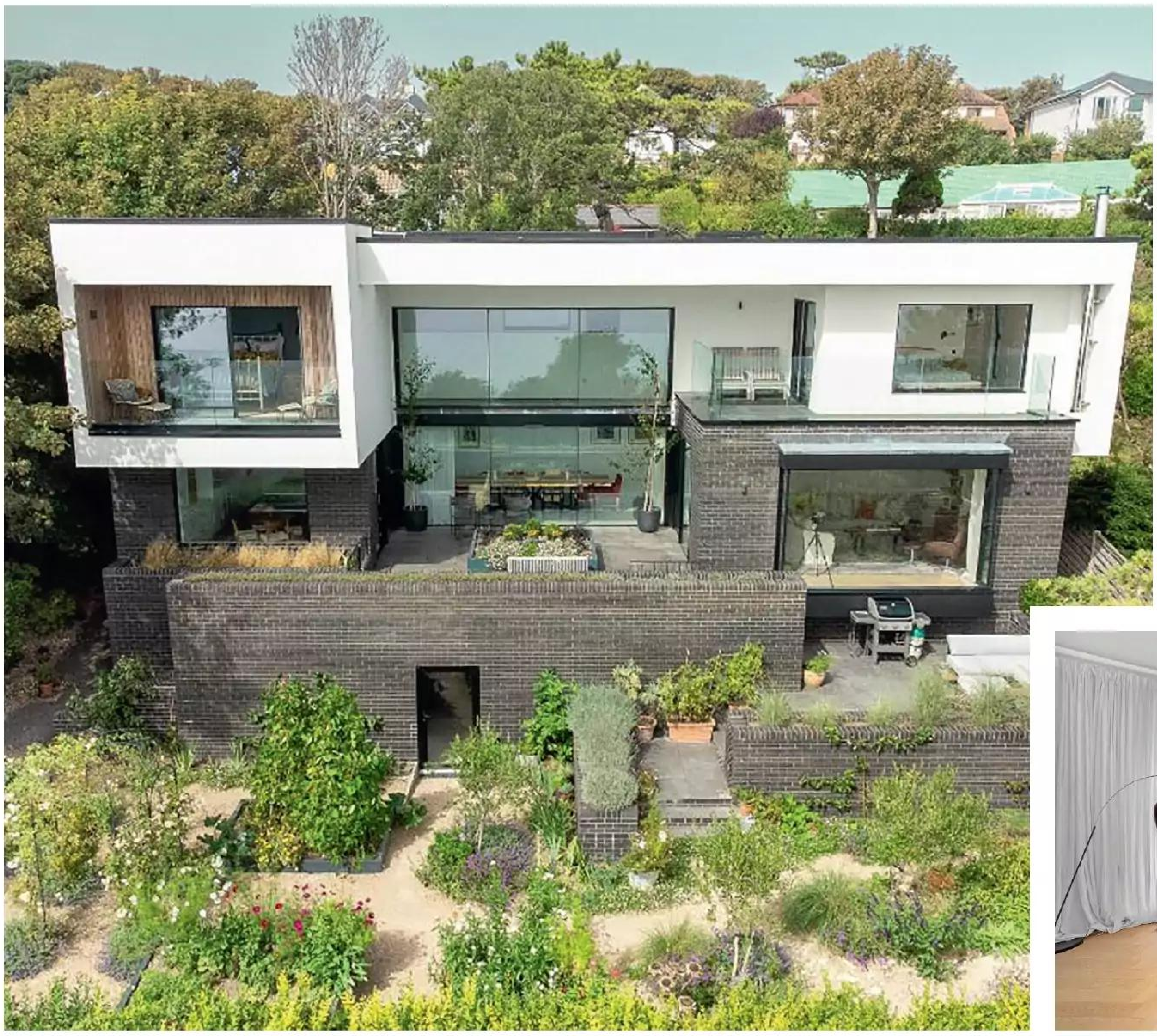
◀ CLAD TO MATCH

This striking home in Suffolk features a neutral brick finish set against zinc and composite cladding, delivering a modern yet sympathetic aesthetic that has echoes of barn-style buildings. Brick slips – thin, lightweight tiles rather than full-size units – were the perfect match for the Daniels & Vincent timber frame superstructure. Slips are ideal for creating intricate details, finishing returns and creating seemingly gravity-defying features such as brick-clad cantilevers – plus they're quick to install and preserve a slim wall profile, mirroring the benefits of timber build systems. **(www.danielsandvincent.co.uk)**

TRADITIONAL STYLE, MODERN PERFORMANCE ▶

This heritage-inspired home was constructed using Frame Technologies' TechVantage E panel system, featuring 100mm of factory-fitted rigid insulation plus an internal insulation liner to achieve excellent energy performance within a minimal wall thickness. The external cladding sets random stone walling against a Tudor-style rendered and boarded finish for the two upper gables, lending an oak home-style feel to the timber frame property. **(www.frametechnologies.co.uk)**





◀ PEAK PERFORMANCE

Nestled atop the White Cliffs of Dover, this complex contemporary self build offers captivating views towards the French coast. The floorplan cleverly integrates internal and external living spaces, while the high-performance build system from Harmony Timber Frame enabled the inclusion of eye-catching features, such as slimline picture windows. Harmony worked with the client from concept to completion, delivering a comprehensive open-panel timber frame package. The superstructure was completed in four weeks. **(www.harmonytimber.co.uk)**

▲ ALL IN THE DETAIL ▶
The Long Barn won Best Timber Frame Home in the 2024 Build It Awards. Described by one judge as “the perfect candidate for timber frame,” this project is an exemplar of how to plan and realise a beautiful bespoke home on a tricky plot. Key to its success was the collaboration between TAS Architects, the client and structural system supplier Timber Innovations. A major factor was the extensive structural drawings that formed part of the technical design pack, with the impressive timber frame detailing shining through in the house’s performance and its wow-factor interiors. **(www.timberinnovations.co.uk)**

▲ TURNKEY DELIVERY
The Barksfields decided a turnkey timber frame build would be the best route for them, with a single supplier – Dan-Wood – taking their project all the way from concept to completion. The house is based on the company’s Point 206E design, albeit with a few modifications: the four bedrooms have been reduced slightly in size, for instance, to allow for walk-in wardrobes. “The open layout has really improved the way we live; we can all be together as a family and it works beautifully,” say the owners, who are also delighted with the house’s eco credentials and energy efficiency. The project was completed in an astonishing 10 weeks on site. **(www.danwood.co.uk)**

▼ MAKING WAVES
MBC Timber Frame’s twin wall Passive wall, roof, foundations and airtightness package delivered a swift, neighbour-friendly build for this impressive low-energy home on a challenging site near a popular beach in Anglesey. The 250m^2 property’s timber frame superstructure was erected in just two weeks, reducing impact on the local area. Its coastal position required careful materials choices, such as Partel’s Echofoil Exo reflective breather membrane, which features a lacquer coating to protect against exposure to airborne sea salt. **(www.mbctimberframe.co.uk)**

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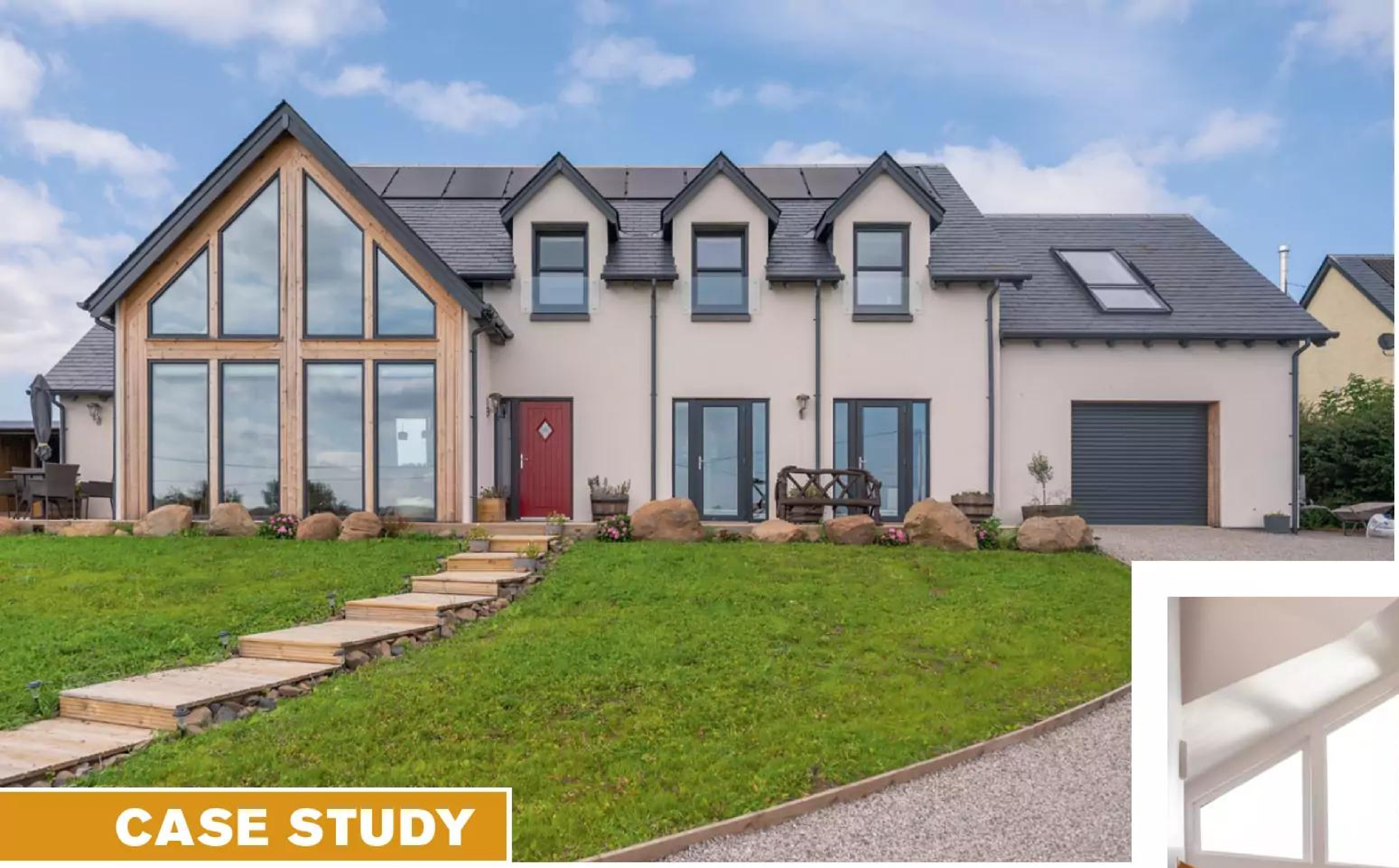


Location Roxburghshire

Type of Project Self build

System Timber frame

House Size 215m^2 (including attached garage)

Package Type Construction design, manufacture and supply of timber frame

CASE STUDY

TIMBER FRAME ENABLES QUICK BUILD

After selling their Gloucestershire home in 2021, George Boath and Jeneane Ezzell struggled to find a property that ticked all their boxes. A colleague inspired them to take the bold step of building their own home – and White Horse Cottage is the stunning result.

Nestled in the peaceful Roxburghshire landscape, the project is the culmination of their vision for a unique, environmentally conscious sanctuary. Featuring warm, light-filled interiors, the carefully considered four-bedroom layout includes dedicated zones for work, relaxation and socialising. At its heart is a striking barn-style living area, complete with vaulted ceilings and expansive glazing. This floods the spaces with natural light and frames breathtaking views of the Tweed Valley and Cheviot Hills, creating a seamless connection between indoors and the surrounding countryside.

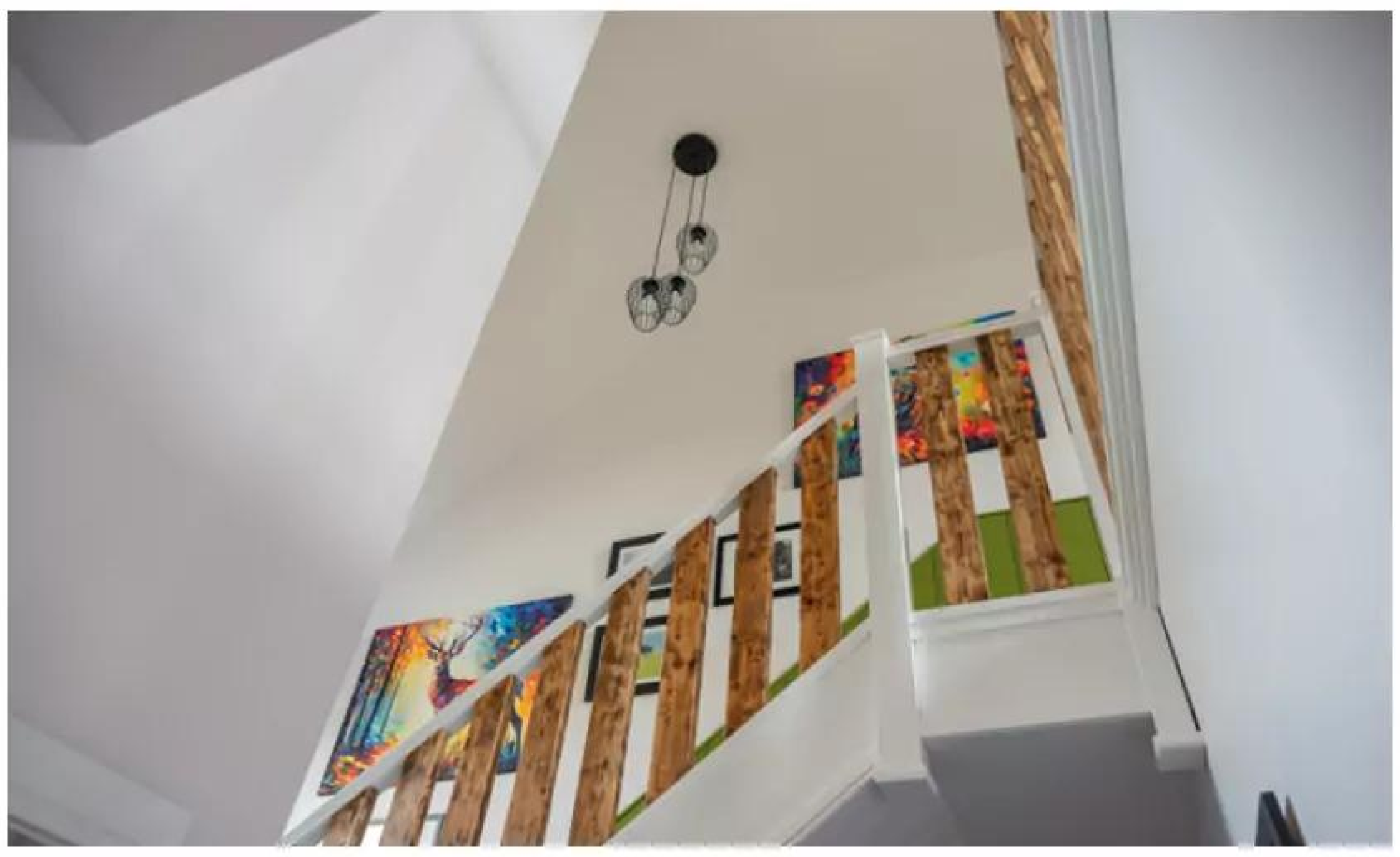
A prefabricated timber frame was the perfect choice, offering a super-quick route to weathertight and exceptional thermal efficiency (an ideal partner for the house's advanced energy systems). "We weren't prepared to sit and wait for the time it would take for a stick build or brick-and-block," says George. "Speed of construction was the number one reason we chose timber frame, along with our desire to create a sustainable home." Remarkably, they moved in just six months after breaking ground.

George and Jeneane partnered with Fleming Homes to bring their dream to life. "We felt more than just a number," say the couple. "The team's willingness to collaborate on individual components, along with their prompt and personal communication, made all the difference."

Above: The house reflects the local architectural vernacular, while expressing George and Jeneane's contemporary design tastes

Top right: The complex roof structure was resolved using a mixture of Fink trusses, attic trusses, vaulted ceilings, raised tie ceilings and mono Fink elements

Right: Quirky charm has been achieved via thoughtful repurposing. Surplus Siberian larch from the gable cladding was used for the stair balustrades



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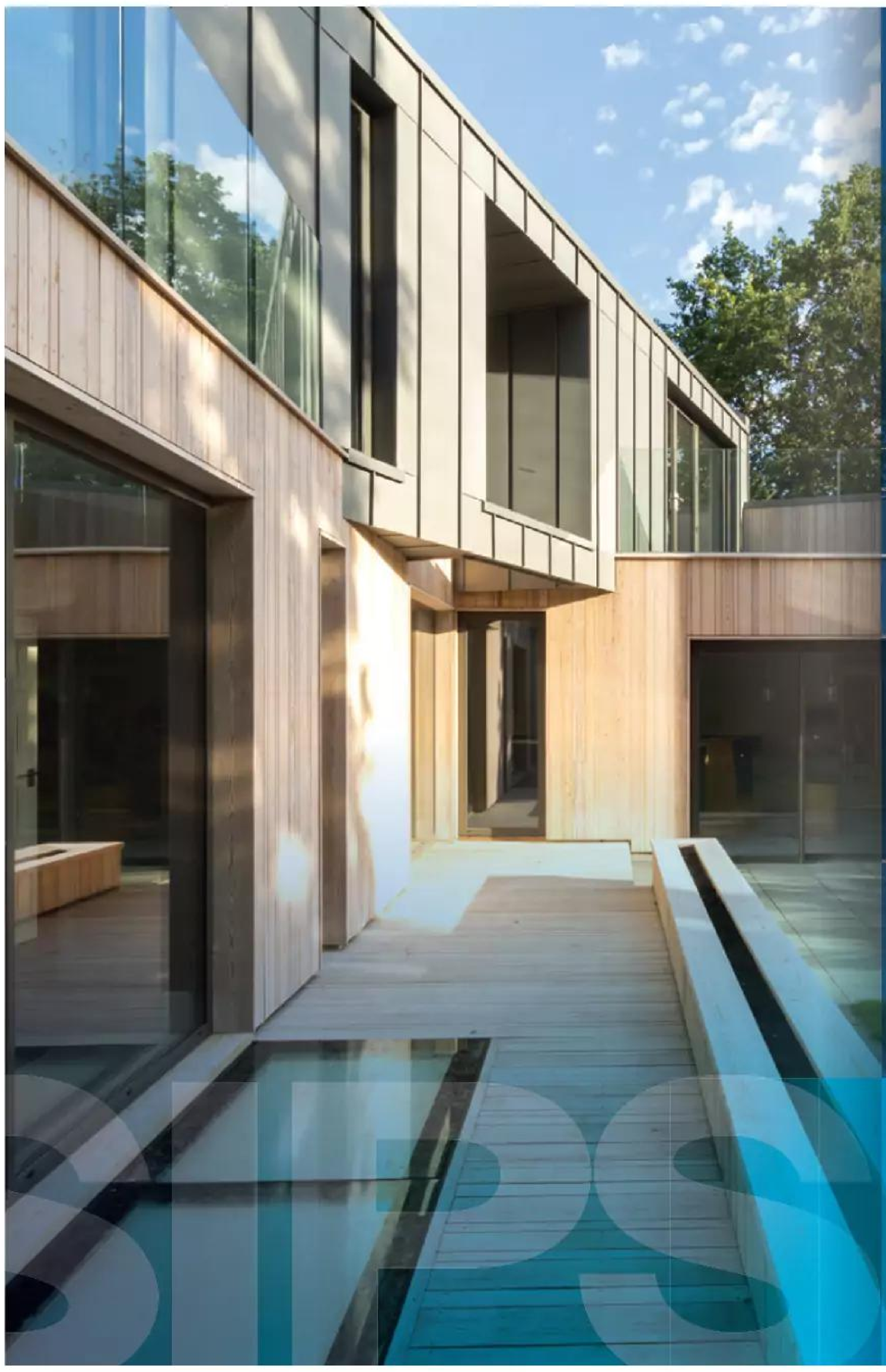

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QUICK GUIDE

PAYING FOR YOUR TIMBER HOME

Factory-manufactured structural systems involve a bit more front-loading on your project spend. Here's what to know about funding a timber build

With timber building systems – including timber frame, SIPs and oak frame – the main superstructure of your home is prefabricated bespoke to your chosen design. As a result, the cashflow profile is different to more site-based methods, where your outgoings at the structural stage might typically be fairly evenly distributed. Instead, you'll be expected to pay for more of the house shell up front.

The payment plan for your timber build will depend on your supplier and project profile. A common arrangement might involve a 25% deposit to enable manufacture, followed by instalments up to delivery, with installation costs due once the kit is delivered to site. So, you may well be committing to spend around 15%-25% of your total project budget before a single panel or section of oak is craned into position. In doing so, you gain all the benefits of a speedy, cost-certain build, high-quality construction and guaranteed performance levels. Your standard high street lender isn't likely to recognise those benefits – or offer the flexibility to fund your dream home goals (timber build or otherwise). So, what can you do if you need a mortgage for your project?

SPECIALIST SELF BUILD MORTGAGES

Modern structural timber systems, such as those built to STA Assure standards, are widely accepted by lenders. But you need the right kind of provider – namely a specialist self build mortgage lender.

These firms recognise timber as a standard form of construction, albeit they may have specific lending criteria. For instance, some will accept timber cladding across the whole exterior, whereas others might set percentage limits.

Going through a broker, such as BuildStore, will ensure you have access to the widest selection of lenders, so your project can be matched to the most appropriate product. To give yourself the best chance of success, engage with a mortgage expert early, look closely at the different lenders' requirements and be open to tweaking your initial ideas.

TAILORED TO YOU

There are two main types of self build mortgage: valuation-based and cost-based. In both cases, payments are staged to fit your project profile and cashflow.

Valuation-based mortgages pay out in arrears (after each milestone). The amount released relates to the increase in value since the last payment. Money you've spent on a yet-to-be-assembled house kit isn't likely to be reflected in that assessment. That's not an issue if you have strong cash reserves to call on. However, this type of mortgage can be better suited to site-oriented build methods.

Cost-based mortgages are released based on the costs of each agreed stage, rather than a valuation, with products available that pay out either in advance or in arrears. This makes them well-suited to offsite construction systems, as you gain extra certainty that you'll get the exact agreed sum when you need it.

ELLIE WALPOLE

STRUCTURAL INSULATED PANELS

Discover SIPs – a versatile and high-performance building method capable of delivering spectacular homes

SIPs (structural insulated panels) is a modern building system is engineered, factory-manufactured and supplied in kit form. Delivering the thermal envelope of a new home or extension in one neat package, the panelised wall and roof elements can be craned into place quickly and easily to reach weathertight stage much quicker than with traditional build methods.

The panels comprise a high-spec insulating core that's sandwiched between wood-based sheet materials, such as OSB. At first glance, the panelised components look a lot like timber frame, but SIPs has its own benefits and considerations.

Above: Allister Godfrey Architects (allistergodfrey.com) was brought on board post-planning to rationalise the engineering of this self build home, when the original design proved over budget. Among the key changes was switching from cross-laminated timber to a SIPs system by Glosford SIPs

So, what are the factors that might point you towards using this structural solution for your self build project? Among the key advantages of SIPs are:

- Quality controlled offsite-manufactured system.
- No internal studwork, enabling continuous insulation.
- Airtightness detailing is straightforward.
- Super-strong in a very thin wall and roof profile, enabling features such as vaulted ceilings.
- Exceptionally quick to build with.
- Partners well with other construction techniques, such as oak frame.

DESIGN VERSATILITY

Many SIPs homes are architect-designed. You'll want to appoint a specialist supplier appointed in the early stages to engineer a kit that achieves the look, build quality and performance you desire. That said, some manufacturers do offer in-house design. In terms of what you can achieve, the only limits are your imagination and your budget. SIPs can be used to create strikingly modern homes as well as more traditional schemes, and clad with any material you choose, from timber to brick, stone, metal, render or a mix of multiple finishes.

Many SIPs house designs retain clean, square lines – perhaps more so than with timber frame builds. That's partly because this helps to accentuate some of the system's key benefits, namely its great insulation coverage, straightforward airtightness detailing and quick build speeds. But if you really want curves and other unusual features, they can absolutely be accommodated at the design and production stages. All of this is delivered in slender wall profiles, helping to maximise the internal floor plan of your new home.

"Each company has different details and panel thicknesses, which will influence the design drawings," says Derek McIntyre, SIPs director at JML SIPs. "Bringing your supplier on board early saves time and money, as opposed to having to rethink plans to suit the system afterwards."

FACTORY ASSURED PERFORMANCE

Just like other pre-manufactured timber systems, a quality SIPs system offers the peace of mind of precision engineering, minimal waste materials and reduced reliance on site labour for airtightness. A house shell package will include everything you need to form the walls, roof, floor and internal walls. Manufacturing lead times are typically around 10-14 weeks.

SIPs panels are typically produced at a thickness of around 170mm, with a high-quality insulated core bonded to two sheets of oriented strandboard. A further thermal lining can be added on site to achieve your preferred level of energy performance, although some manufacturers can vary the panel thickness to integrate more thermal protection. Note there's limited choice over insulation; natural options aren't common yet.

"There are plenty of systems on the market, so make sure you understand their benefits," says Ian Clay, partner at SIPS@Clays. "Look at the thermal qualities – in particular the jointing system, which is key to creating an airtight structural envelope – as well as certifications, fire performance, strength and stability."

As there's no need for timber studs within the panels, insulation coverage is maximised and thermal bridging (the potential for heat to escape across components that bridge the structural envelope) is minimised. Some systems use insulated splines at the joins between panels to under this benefit. Put that all together, and SIPs can be a fantastic choice for achieving fabric-first, low-energy standards – something many self builders want – competing well with timber frame on simplicity and cost-effectiveness at this end of the performance spectrum.

Above: A pre-insulated roof panel being craned into place as part of a SIPS@ Clays project. The system's innate strength enables a much clearer attic void than standard trussed rafters – supported here by a glulam ridge beam and purlins

SUPER-FAST BUILD

In experienced hands, SIPs is probably the swiftest build system out there – potentially pipping even closed panel timber frame – hence why it's developed a reputation as a strong fit for projects in exposed locations, or where good weather can't be relied on.

The panels are lightweight, easy to handle and simple to assemble. Weathertight stage can be reached in under a week on standard designs, and just two to three weeks on more complex projects. "The superstructure can be erected up to 60% quicker than a brick build," says Pete Samson, founder of

ANTHONY HARRISON

Above: With a spacious open-plan layout, enhanced by mono-pitched vaulted ceilings, this project was a great fit for Sips Eco Panels' build system – delivering a modern, easy to run, low energy home

Ecologic SIPs, who also notes the impact of factory accuracy when it comes to project programming. "You can pre-order windows and doors, so they're on hand and ready to be installed as soon as the house shell is complete." This could save you considerable time versus measuring up openings on site, as it will cut out glazing lead times.

Many self builders accentuate this by opting for quick-to-install external finishes, such as timber, brick slip and metal cladding systems. Follow-on works are very similar to timber frame, so should feel familiar to most trades. Just make sure things like service channels are thoroughly planned to avoid breaching your highly insulated and airtight structural envelope.

VAULTED CEILINGS & LOFTS

We've already mentioned SIPs' design potential, but there are certain areas in which it excels – perhaps most notably in terms of roof design. The bonding process used to manufacture the panels delivers incredible strength at a very light weight.

This makes SIPs an ideal choice if you want to achieve a habitable, pre-insulated loft spaces without the need for excessive support structures in the roof void (as you would get with standard Fink trusses). For the same reason, this system is fantastic for realising sleek vaulted ceilings. What's more, it can deliver these features in a thin panel profile – helping you to eke out every millimetre of floor-to-ceiling height.

The same logic also applies to walling. "SIPs panels are inherently efficient and airtight, with a core of insulation, meaning the thickness to meet Building Regulations is notably thinner than other systems," says Pete Samson. "You can achieve Passivhaus levels of performance while retaining a good amount of floor space in your plan."

SIPS COMBINES WELL WITH OTHER SYSTEMS

While most self builders will use SIPs for the entire house shell kit to simplify the engineering and on site delivery, an interesting feature of this system is that it can partner well with other construction methods. For example, it is perfectly feasible to build the walling in blockwork or insulated concrete formwork (ICF) – which might make sense if your project includes a basement or retaining walls – and top the house with a SIPs roof for a live-in loft.

The panels are also often specified as an insulating wraparound for oak frame projects – delivering modern performance, while keeping the beams on show internally.

EXPERT VIEW

How SIPs enables better quality homes

Andy Porter
Partner at SIPS@Clays

"SIPs has been around in the UK for over 20 years, and it's a tried-and-tested system that does what it says on the tin. The kit is basically a big jigsaw that goes together easily on site, which makes it a very simple way of building an airtight, pre-insulated home, where you know the U-value you were quoted is what you'll get. All the joints are sealed, and everything's pulled tightly together, so you can get a great result – down to an airtightness of $1m^3/hr/m^2$ – without having to rely on people doing secondary work on site. The SIPs wall forms your airtightness layer, and you can do away with a lot of the cost and snagging involved in installing additional tapes and membranes.

It's also a super-rigid system that doesn't settle, so you won't have to deal with construction cracks as you do with other building methods. The panels can deliver lovely vaulted roof spaces, too, which works really well for dormer bungalows, 2.5- and 3.5-storey homes. With our system, you can get the roof straight on and it's ready-insulated, rather than having to take the time to insulate trusses on site. If you want to build a high-performance house with a room-in-the-roof, SIPs is a cost-effective way to do it – and you get a beautiful, rigid building that requires minimal heating."

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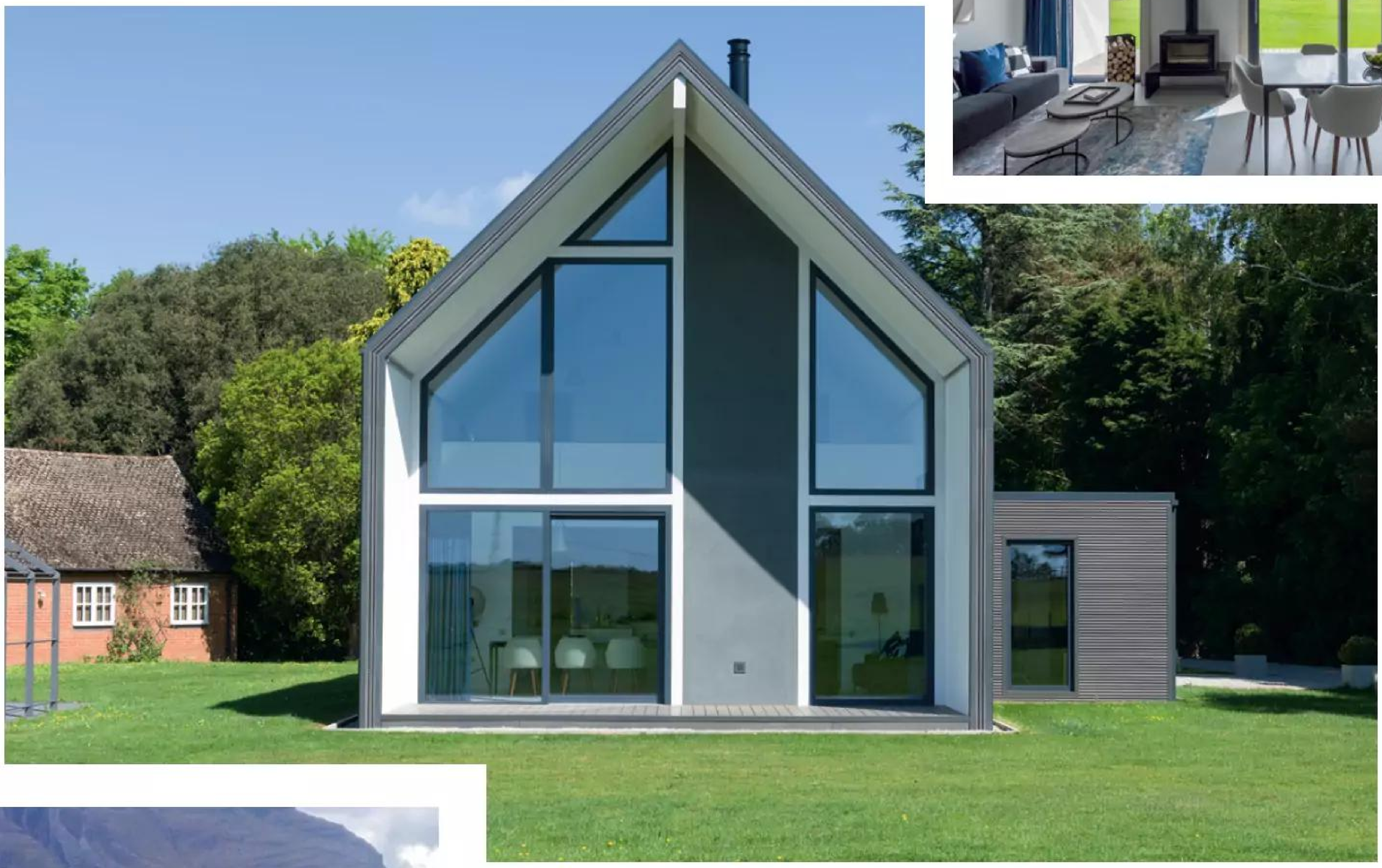
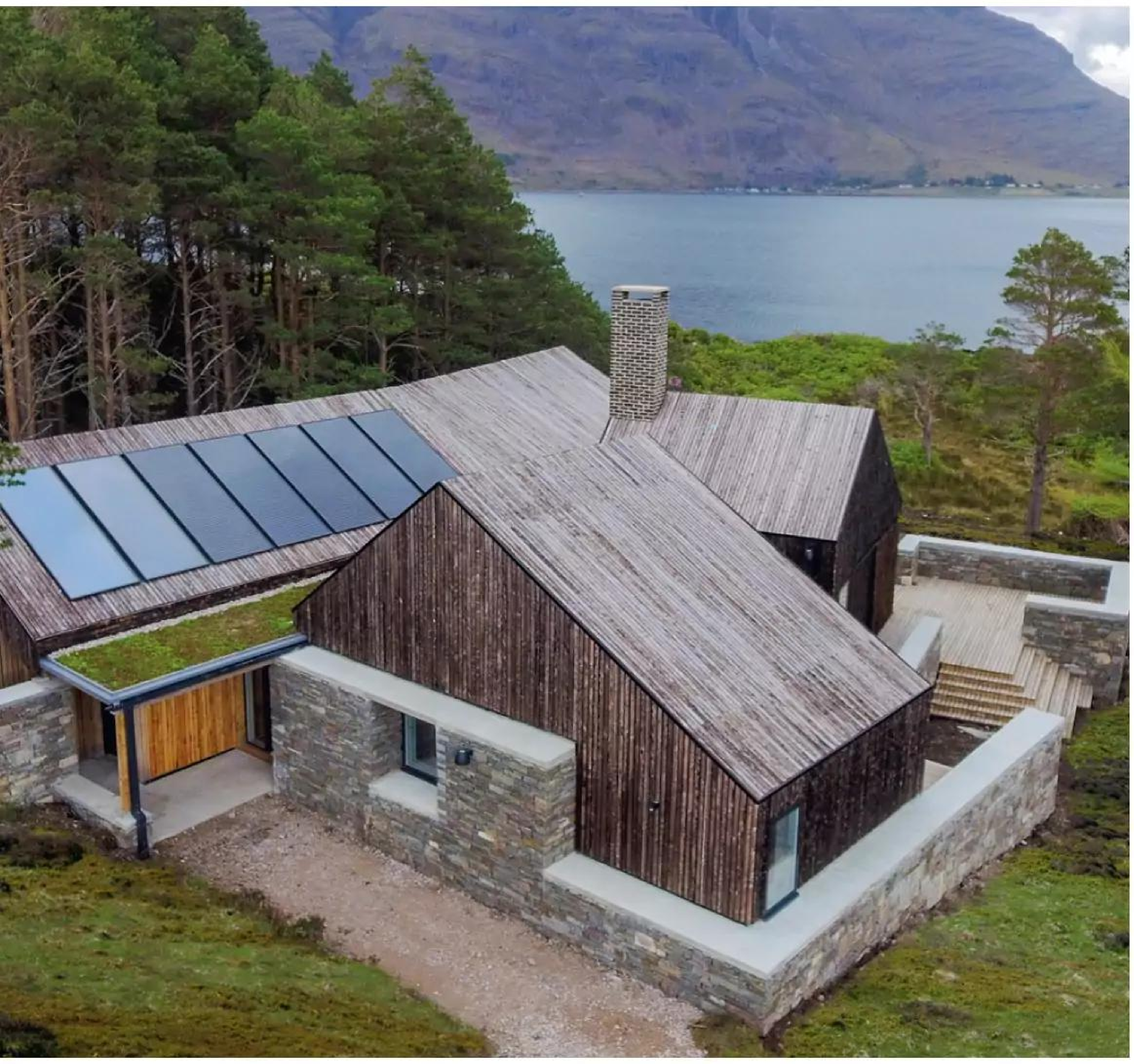
DESIGN IDEAS

INSPIRING SIPS SELF BUILDS

We unveil a range of SIPs projects that maximise this construction system's design and performance benefits

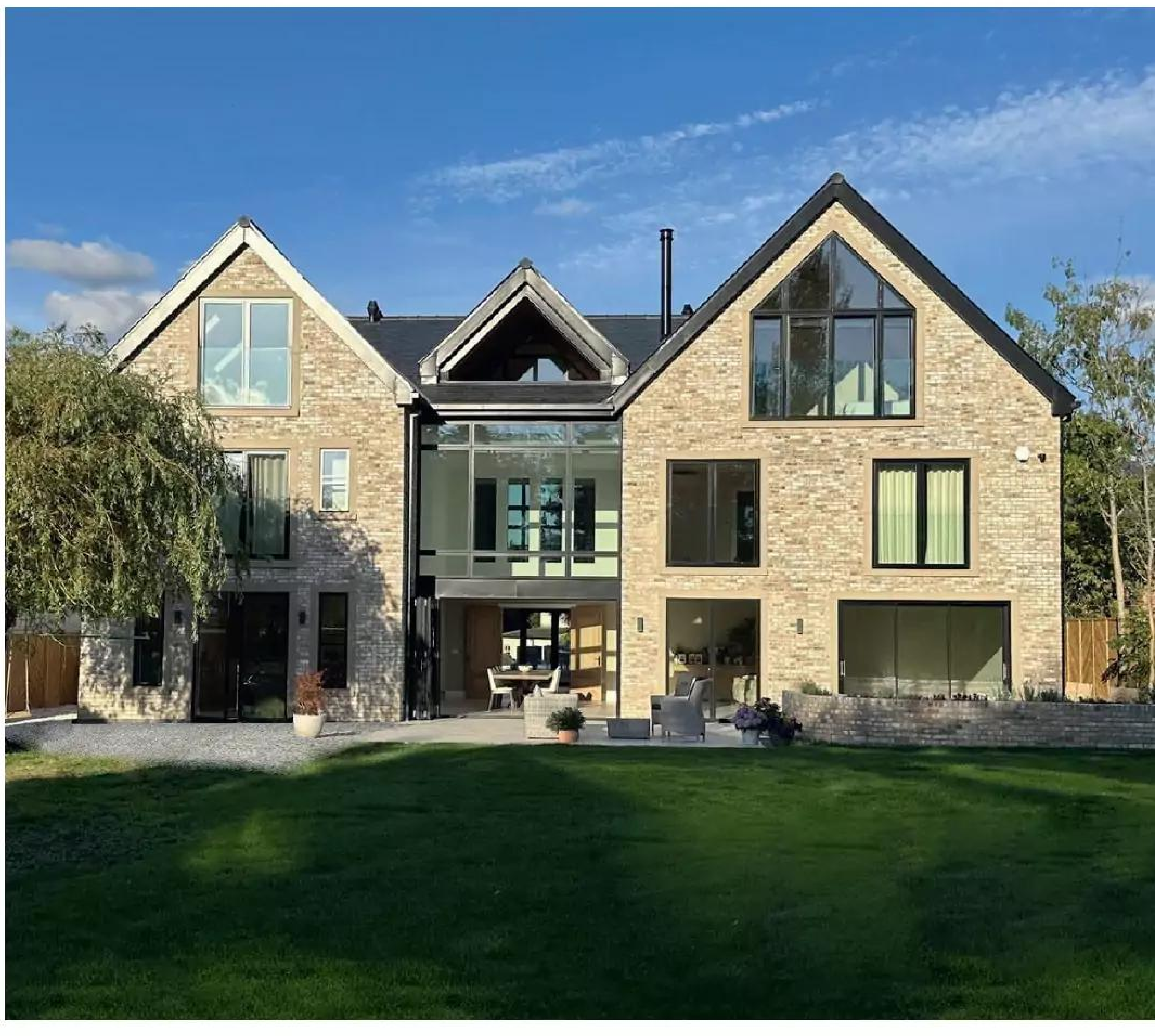
MODERN WONDER ▶
SIPCO's high-performance SIPs wall and roof panels form the core fabric of the low-energy Wunderhaus system – a house building method developed by German architect Nico Rensch. Pictured here is the Wunderhaus show home in Battle, East Sussex – but the approach can be used to create bespoke designs to match client's specifications. Key features include open-plan, double-height living areas, a 7.5m gable with panoramic windows, and zero annual net energy costs thanks to a 12kW solar PV array. **(www.thesipcompany.com)**





▲ RISING TO THE CHALLENGE
This sensitively designed, low-energy holiday house in the Scottish Highlands is a former RIBA House of the Year. The complex scheme included three floor levels and eight roof areas in a single-storey building, while the remote location made for a tricky build. No mechanical assistance was possible, so JML SIPs engineered and pre-cut the panels to enable delivery on a small trailer and manual handling on site, with its own install team efficiently assembling the kit in a snowy and windy January. **(www.jmlsips.co.uk)**

▼ GLORIOUS GABLES
Featuring vast spans of cathedral ceilings, huge areas of glazing and a fully vaulted open stairwell, this three-storey home was an ideal candidate for SIPs construction. SIP Build UK took responsibility for the full SIPs system, including structural steels, ensuring accuracy and supporting a fast-track install programme. Specifying 175mm-thick wall and roof panels enabled the target U-values to be achieved without the need for additional insulation liners. **(www.sipbuilduk.co.uk)**



◀ GOING OFF GRID

Built on an elevated north-facing slope, with views of Hadrian's Wall, Westfield is a highly efficient 300m^2 new home, and winner of the 2024 Build It Award for Best Eco Home. Engineered and installed by SIPs@Clays, the house shell uses ultra-insulated 142mm-thick SIPs panels, delivering excellent thermal performance and airtightness. A 3kW wind turbine, 6.4kW of solar PV panels and an MVHR system all contribute to delivering on the owners' net zero targets. The clients also addressed sustainability by sourcing local and recyclable materials wherever possible, and creating a wildflower meadow and wetland area. **(www.clays.com)**

▲ REINVENTING THE FARMHOUSE

Conceived by Raise Architects, this 440m^2 self build in Dorset represents a high-performance, contemporary take on vernacular countryside architecture. Ecologic SIPs was called in to engineer and deliver a structural solution that would meet the clients' expectations for impressive energy efficiency in use, while maintaining the design's wide spans and impressive volumes. The company's SIPs system enabled thin wall profiles and fantastic, light-filled spaces – including double-height zones. An internal SIPs wall provides a fixing point for the bespoke cantilevered staircase, demonstrating this method's versatility. The house shell went up in just 19 days on site. **(www.ecologic-sips.co.uk)**

▲ ABOVE & BEYOND

Seabreeze is a six-bedroom, carbon neutral holiday home on the Cornish coast, built using the Glosford SIPs system. Set in an area of outstanding natural beauty, the project balances contemporary style with a sympathetic 1.5-storey design to keep ridge heights low. Using SIPs has helped to maximise space, thanks to its ability to deliver wow-factor, highly-insulated vaulted ceilings in a slim roof profile. **(www.glosfordsips.co.uk)**

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INSURANCE & WARRANTIES FOR TIMBER BUILDS

Ensure your self build project is protected against any risks or damage with our guide

Structural timber comes with a long list of benefits – so it's no surprise that an increasing number of UK self builders are going down this route to a bespoke home. Most modern timber self builds are prefabricated and manufactured offsite in quality-controlled factory conditions. This means that you're effectively guaranteed a high-performance structure that's been precision engineered in line with the design you've pre-agreed with your supplier.

As the structure is engineered and fabricated in advance, away from site, the potential for damage to the house shell will be significantly reduced during the build and after you move in. As with any project, however, it's vital that you understand the associated risks and hazards with structural timber, such as fires, damage caused by insect infestations and decay. Selecting quality materials and suppliers, such as those accredited by STA Assure, and backing this up with insurance will mitigate any issues both during the construction phase and well into the future. Here are the three main types of insurance you need to know about.

SITE INSURANCE

This type of policy protects your build throughout its construction. It'll cover physical injuries to members of your build team or damage to the construction works, building materials, tools, plant and any building equipment used throughout the project. Theft, vandalism, fire and weather-related damage will all fall under site insurance. This type of policy is usually taken out at the point when you exchange contracts, or before construction work starts on site. Your site insurance will then continue to cover your project throughout the build until it's complete and you move in.

PUBLIC LIABILITY INSURANCE

This type of insurance will cover you if a member of the public or a neighbour claims that they've been injured on your plot or building site, or that their property has been damaged as a result of your self build construction works. Public liability insurance is designed to ensure that you're backed financially and legally in these situations, and can be included as part of your site insurance policy.

STRUCTURAL WARRANTY

A structural warranty will protect your new build home against any defects that may crop up after it's been built. Structural warranty covers faulty design, materials and workmanship, and will provide you with peace of mind should any of these present issues later down the line.

"The cover is usually issued for 10 years, and for that reason it's imperative that the insurer behind the policy is 'A' rated," says Simon Middleton, managing director at Protek. "A good warranty will incorporate a design check and a series of technical site inspections. These are put in place to check that the build is following the approved specification and is being constructed to a high standard."

Most self build mortgage lenders require a structural warranty. Plus, should you decide to sell in the first 10 years, it will be essential for any buyers who need their own mortgage.

MARK WATTS

Above: This gorgeous post and beam-style country house by Oakwrights won Best Oak Frame Home in the 2022 Build It Awards. Its clever, multi-level design makes the most of the steeply sloping plot

OAK FRAME

From its design opportunities to sustainability credentials, discover the advantages of a build system that delivers on beauty as well as performance

Coveted for its characterful natural aesthetic, impressive design possibilities and outstanding longevity, oak frame enjoys a storied history in UK construction. What's more, modern manufacturing and insulation techniques mean that it remains just as relevant today as it was hundreds of years ago – easily surpassing Building Regs requirements, while simultaneously delivering superlative, future-proofed living spaces. Our guide will help you decide if oak framing is the right system for your new home.

MAXIMISING OAK'S POTENTIAL

Whatever structural solution you choose for your build, it's always best to work with specialist partners who understand how to get the most from the system and your budget. That's particularly true of oak frame. While this is very much a modern system, capable of delivering beautiful and high-performance homes, there are a few quirks that need to be considered in the design and construction of your project.

For instance, oak frames are created around a series of rectangular volumes (bays), which can typically span up to around 8m. These systems use freshly-felled green timber, which means the oak will shrink and crack as it dries out in situ. This is expected, and actually tightens and strengthens the frame, as well as adding the characterful splits and shakes associated with an oak build. But it does need to be accommodated into the engineering by knowledgeable oak frame designers.

Using an architect or design team experienced in the system – whether in-house or external – will help you get the

Right: An oak build being encapsulated with SIPS@Clays panels, to achieve modern energy performance best out of the system, including bay sizes, spans, room proportions and more.

DESIGN POSSIBILITIES

From charming country cottages to barn-style and ultra-modern properties, an oak build can deliver wonderful bespoke homes. Leaving the frame fully exposed internally is great for a traditional look, while concealing more of it – the supporting ribs, for instance – yields a more contemporary vibe, drawing focus to the main timbers. A range of eye-catching features can be achieved with oak framing, including stunning cathedral-style ceilings. “Double-height entrance halls, stairwells and mezzanine landings are great ways to show off the structure,” says Tim Crump, founder of Oakwrights.

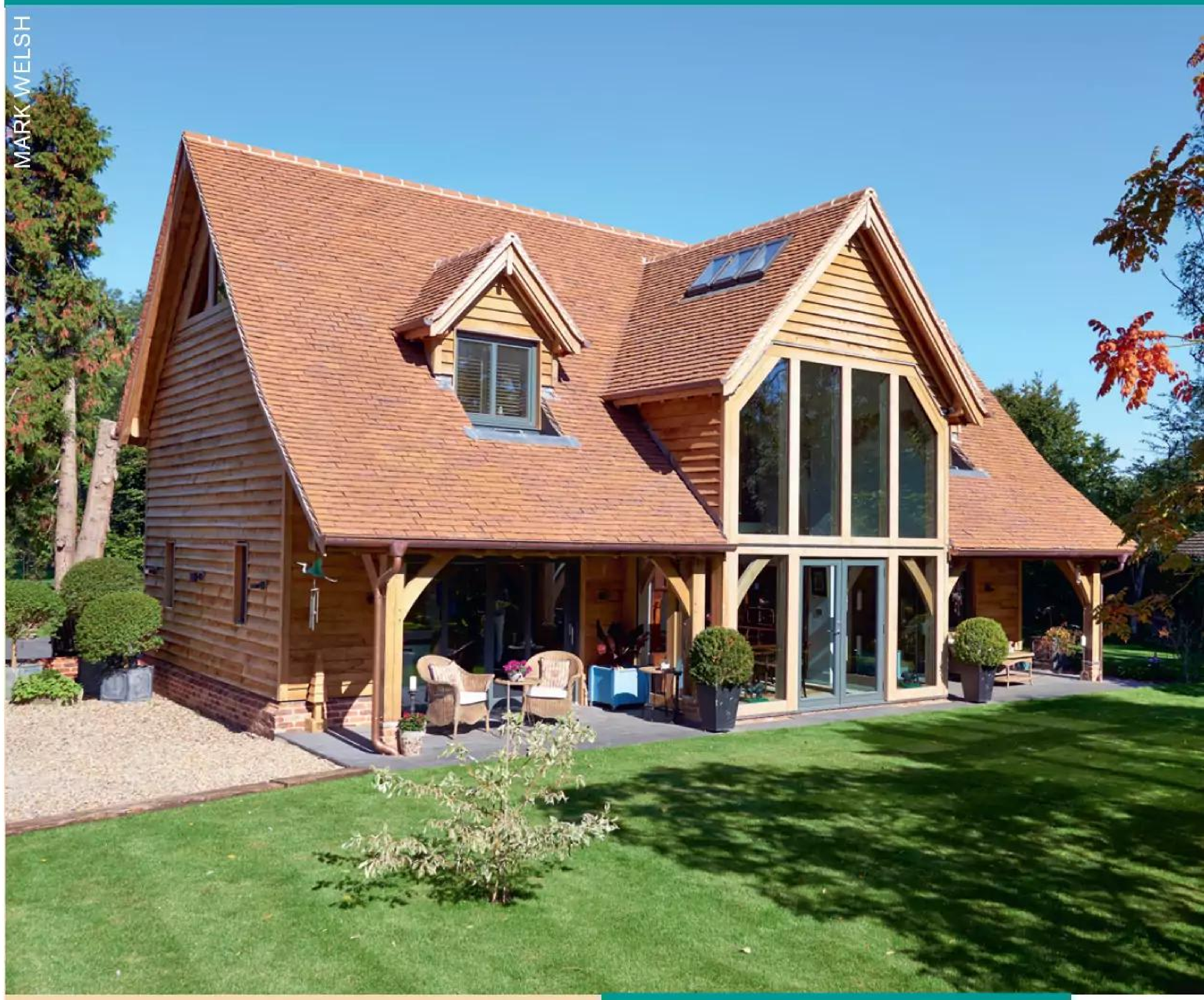
And then there’s the classic oak frame feature: the glazed gable. Combining beautiful timbers with direct glazing – sleeved into the oak in a way that preserves energy efficiency – delivers architectural wow while opening your home’s interiors to the views afforded by your plot. Using windows with minimal framing can achieve a similar look. The detailing is important, too: do you want traditional pegged joints, for example, or would you prefer to use steel connections for a more modern feel?

SUSTAINABILITY & PERFORMANCE

Oak frame construction offers substantial sustainability benefits. When responsibly sourced, the core materials have a low environmental impact – and this can be further enhanced by pairing your oak superstructure with natural insulations and other low-carbon materials. “The carbon footprint of producing and working with oak is significantly lower than steel or concrete,” says Helen Needham, head of architecture at Oakwrights.

Your oak home will also deliver excellent energy efficiency in use, thanks to modern encapsulation systems. These days, the oak frame structure is generally left on show internally – enabling you to enjoy its warmth and character every day – and

CASE STUDY LIVING IN AN OAK HOME


MARK WELSH

Location Suffolk
Type of project Self build
System Oak frame
House Size 293m^2
Package Type Engineering, manufacture & assembly of oak frame & WrightWall Natural encapsulation

Rupert and Lindsay Osborn made their dream oak home goals a reality in 2015, building this contemporary timber-clad dwelling with the help of the team at Oakwrights. A decade on, they remain just as enamoured with their future-proofed self build as the day it was completed. “Our Oakwrights frame designer worked her magic to ensure we got what we wanted, and we haven’t changed anything since it was first built,” says Lindsay.

The couple’s top tip for future oak frame homeowners is to be patient with decoration and maintenance, as the structure naturally shrinks as it dries out. Plasterboard is typically run behind posts and beams rather than abutting to minimise issues – but, as with any build, a few gaps and cracks are inevitable. “Avoid filling things too soon,” says Rupert. “After a few years, once the frame has settled, you can begin to address any minor cosmetic issues you find.”

The Osborns’ home features large areas of full-height glazing that beautifully complement the oak frame. The warm, rustic character of the wood harmonises with the surrounding landscape – and the comfortable living environment enables the couple to feel connected to the garden year-round. “Thanks to our home’s excellent airtightness, there’s no draughts,” says Lindsay.

Rupert and Lindsay particularly love how the external cladding has aged gracefully; the initial hue has now mellowed to a natural silver patina. Internally, the exposed oak beams retain their original colour and charm.

Above: Specialist companies like Oakwrights can offer handcrafted jointing techniques for ultimate authenticity

wrapped externally with insulating panels. Depending on the supplier, these might be a SIPs or closed panel timber frame solution.

Oakwrights, for instance, offers two variants on its WrightWall and WrightRoof encapsulation system. The standard version features mineral wool insulation, while the natural variant uses wood fibre insulation – enhancing sustainability and breathability, while reducing heating/cooling requirements thanks to the material's density.

Ultimately, just like other timber-based systems, oak framing can deliver a highly insulated and super-airtight building, even reaching standards such as Passivhaus.

MANUFACTURE & ASSEMBLY

Once specified, your new oak frame and encapsulation system will be prefabricated offsite in the supplier's factory or workshop – providing the same benefits of expert quality control, precision cutting, reduced on-site labour, transparent pricing and performance guarantees as other timber systems.

The bespoke oak skeleton will be test-assembled in the factory prior to delivery, with carpenter's marks identifying the exact sequence. When it reaches site, the structure can therefore be pieced together quickly and accurately. "It typically takes around one to two weeks to erect the oak frame," says Helen Needham.

The encapsulation phase generally takes around a week. So, on many projects, you can expect to have a fully insulated, dry shell by the end of week three. This accelerated time frame streamlines site management versus methods like blockwork, and enables follow-on trades to begin their work sooner.

BUDGETING FOR OAK

The cost of your oak frame home will be largely determined by your design and performance goals, plus your project route – are you putting your own time into self-managing the project, for instance, or using a turnkey provider? As a rule, the encapsulated frame will make up around 20%-25% of your total construction budget.

Most self builders aim to match the oak's quality with good specifications elsewhere in the house – clay roof tiles, handmade brick, flagged floors etc. So, it might cost you a bit more, but you'll be building quality and value into the project. "To build a nice oak house, you're probably running at £3,200+ per m^2 of floor space," says Tim Crump. "If you really want to go to town on the spec, then you'll have to budget significantly more."

There are ways to control and reduce costs, most notably through your design choices and use of oak. "Choosing a simpler roof style, reducing bespoke joinery and being strategic about where you place the beams are all smart ways to manage a budget while still achieving that oak frame character," says Helen Needham. You could also consider a hybrid build, where the main accommodation is in, say, timber frame; with oak reserved for the wow moments, such as a glazed gable or vaulted entrance.

Below: Manufacturers such as Lowfield Timber Frames are able to provide hybrid systems, combining panelised builds with oak or glulam features

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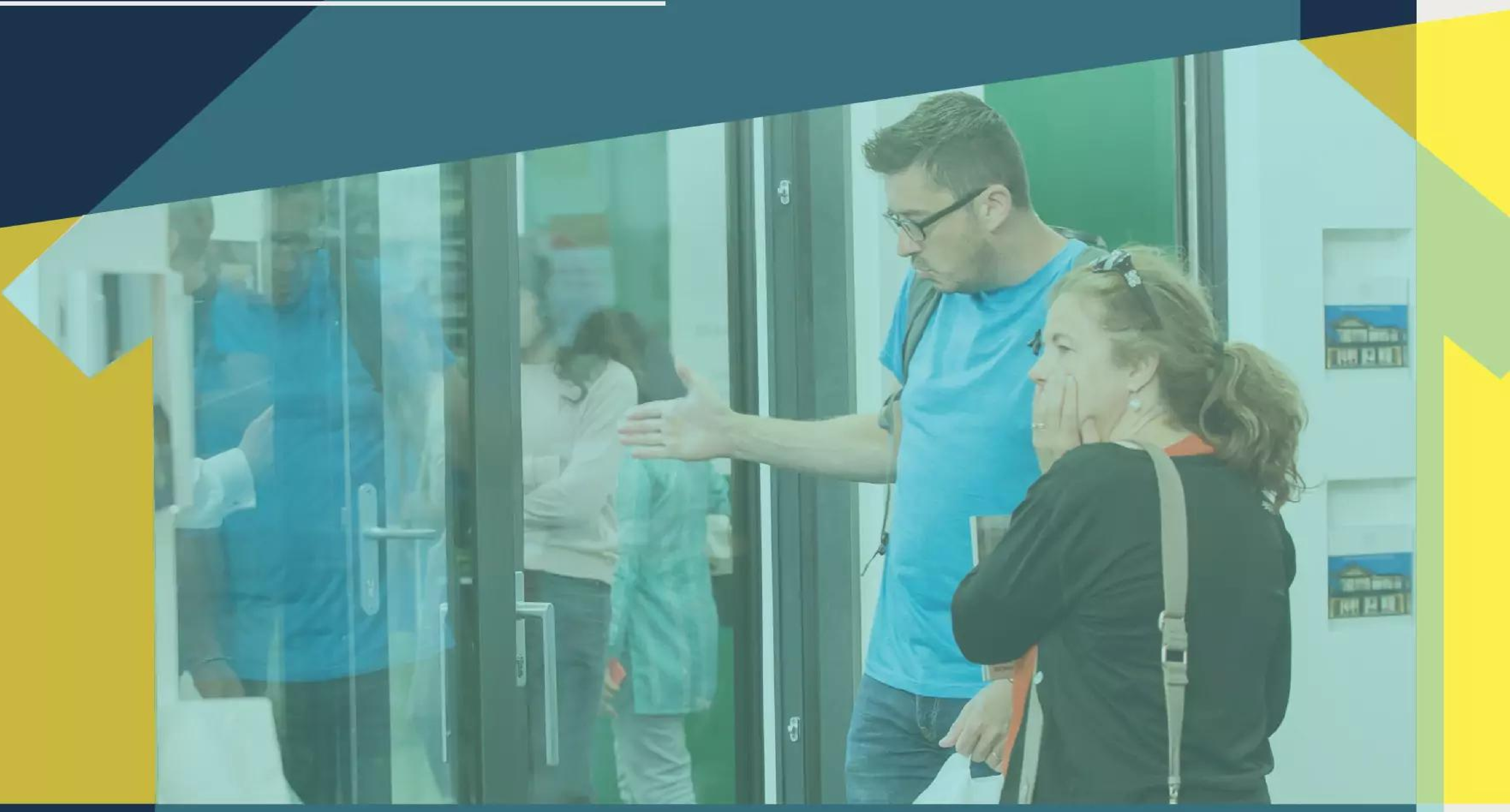

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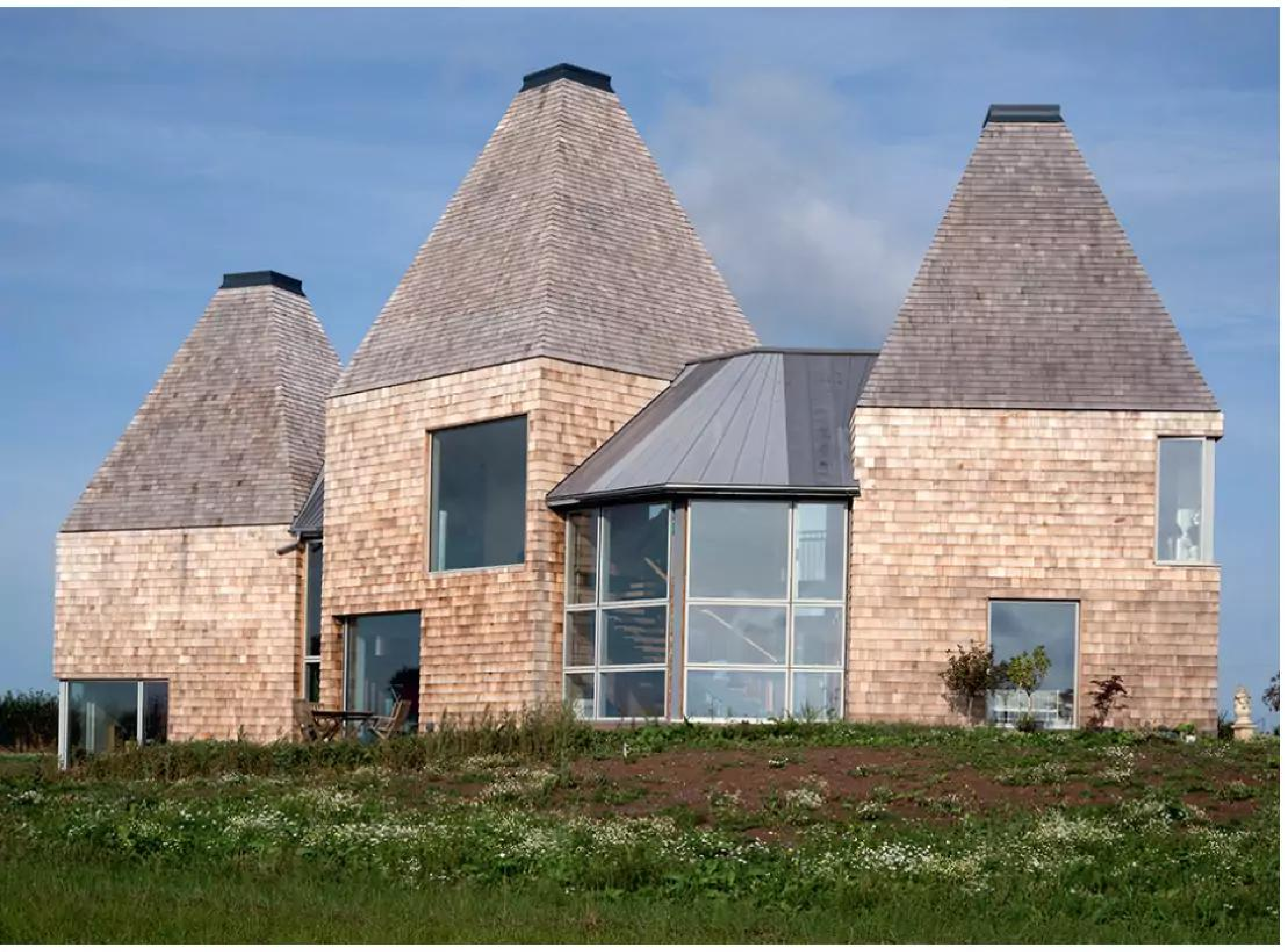
DESIGN IDEAS

CLADDING OPTIONS FOR TIMBER BUILDS

Timber construction lends itself to a range of exterior finishes to achieve the look and performance you're after

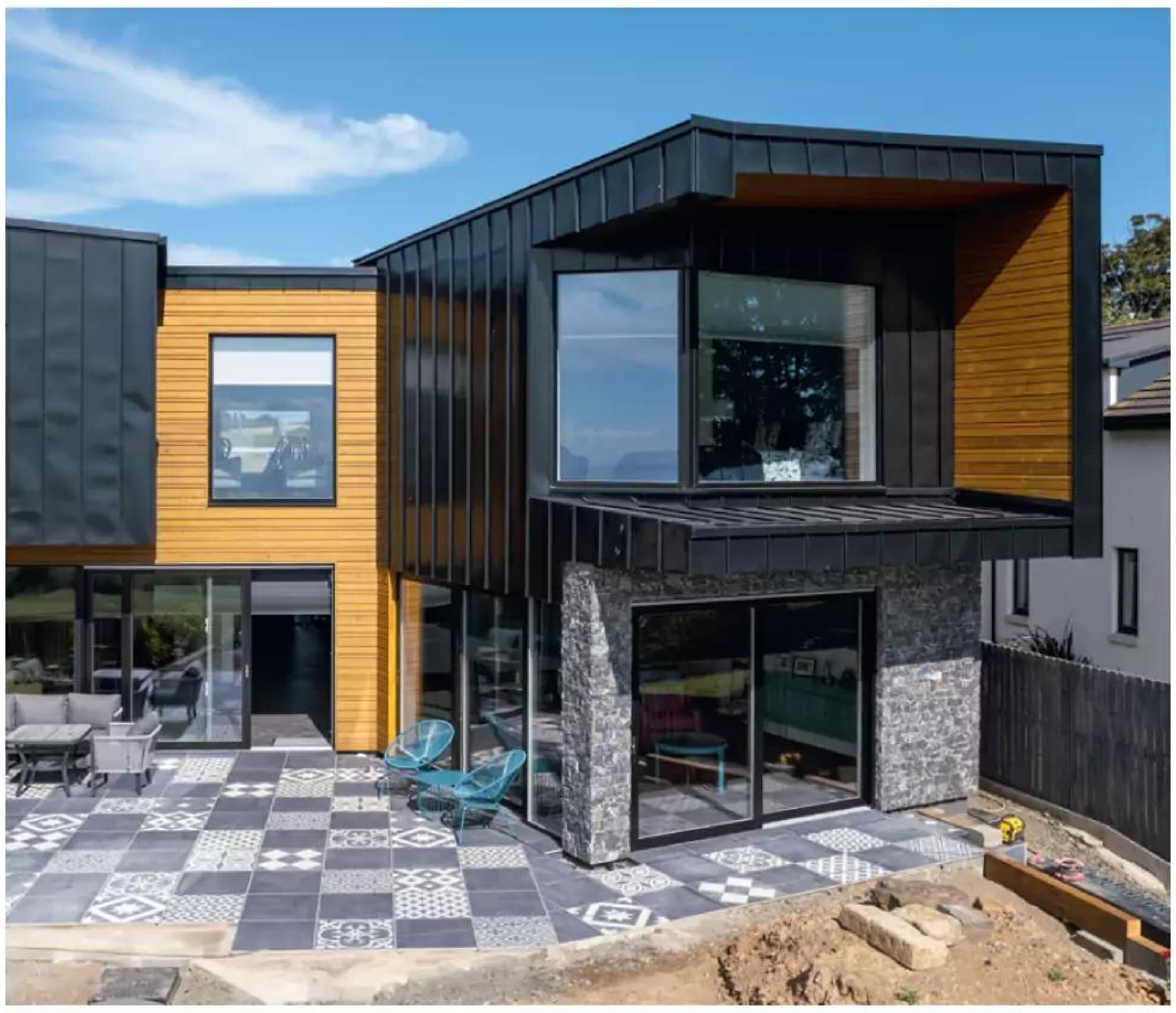
Cladding plays a crucial role in both the aesthetics and performance of your timber-built home. With a variety of characterful materials available in a range of shades, finishes and laying patterns, you're certain to find an exterior solution that balances these factors with your project budget, location and other considerations. Designing this element alongside your structural plans is key to acheving great results. One option is to use a combination of quality materials. "A mixture can be very effective – generally a maximum of two or three finishes looks right," says Helen Needham, head of architecture at Oakwrights. "Getting the proportions and detailing right is essential to ensure that the design looks its best, is sufficiently durable and offers easy upkeep."

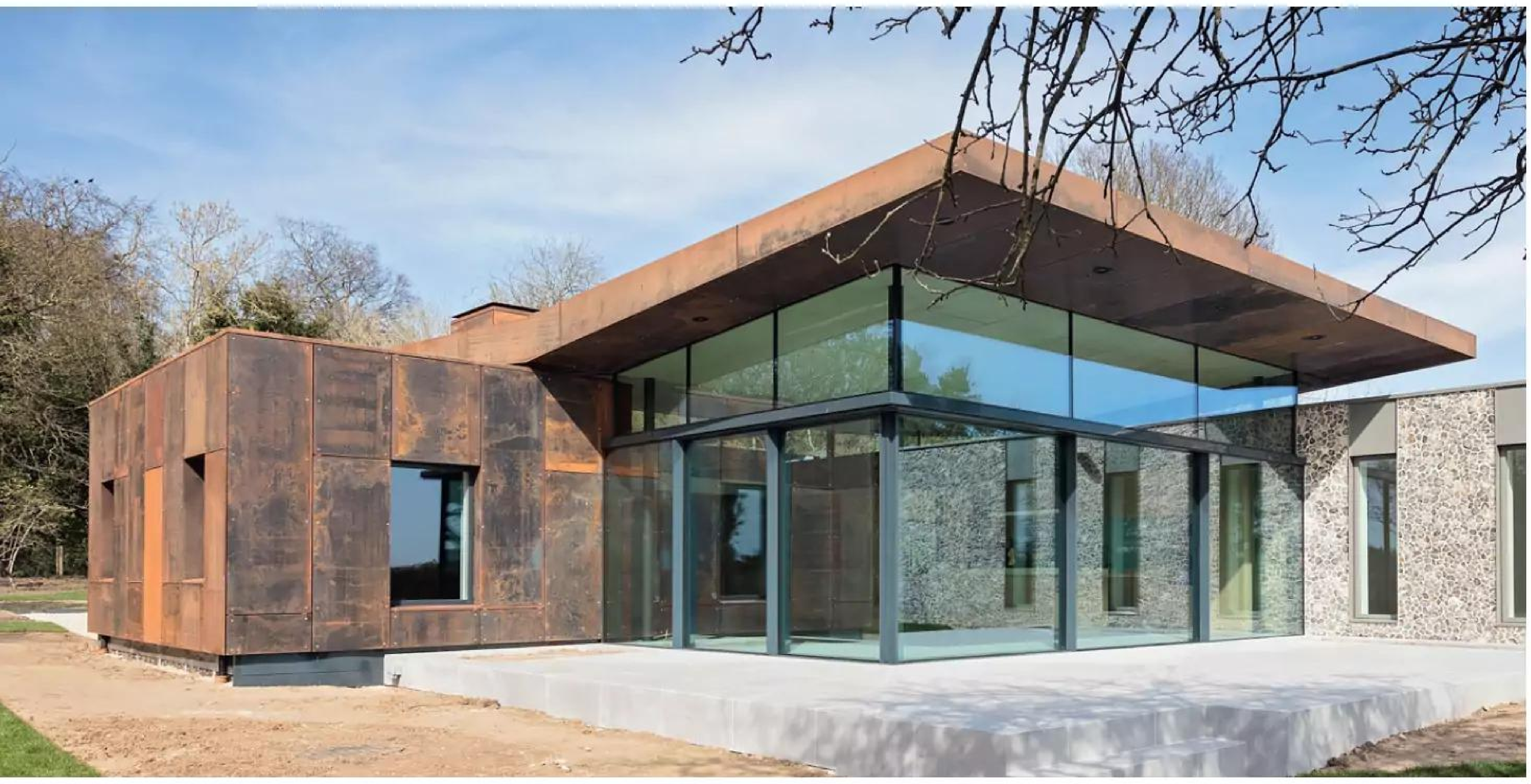
Connecting your house designer, system supplier and cladding provider is a sensible step to help ensure the finish you select is effectively integrated into the building. This enables better quality detailed drawings, leaving no room for confusion on the part of contractors or installers. "It's important to consider how the cladding interacts with the size, shape and details of your building," says Ella Thorns, architect at Studio Bark (www.studiobark.co.uk). "Practical detailing is essential for durability. Timber board ends are vulnerable to moisture, for instance, so capping them and incorporating overhangs can significantly extend their lifespan."



▲ **CONTEMPORARY SHINGLES**
This unique self build sits in 20 acres of open Worcestershire countryside, so an exceptional design was needed to secure planning. The architect's solution was a to create three kiln-like structures, set at different levels, to reflect the region's hop growing history. Glosford SIPs provided a supply-and-install package for the high-performance superstructure, with its factory assured precision vital to achieving the complex geometry. The project, named Fuggles Pocket, is beautifully clad in cedar shingles, punctuated by large picture windows and corner glazing. **(www.glosfordsips.co.uk)**

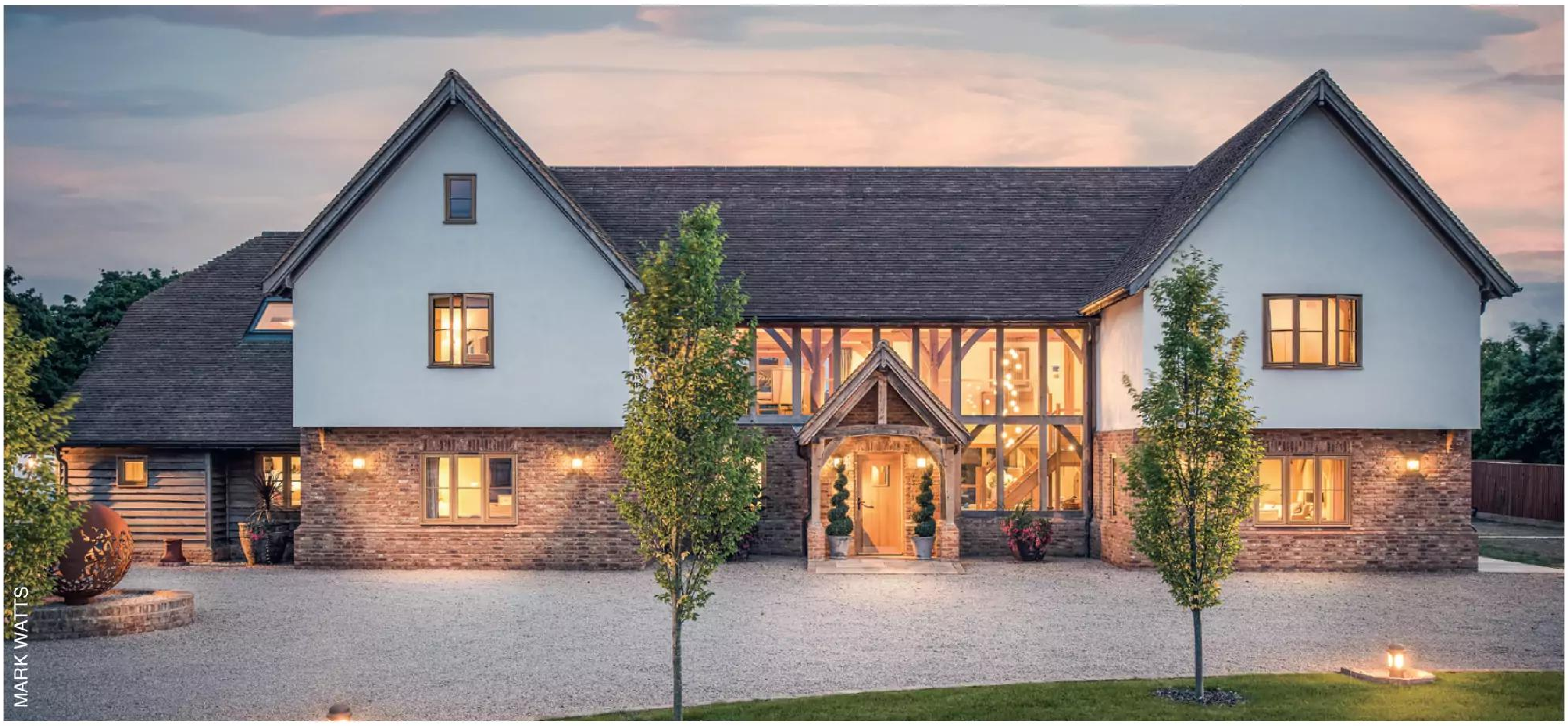
▼ **MIX & MATCH**
Self builders Norman and Jackie Wright identified Allan Corfield Architects (www.acarchitects.biz) as the ideal design partner for their dream home build. The team has significant expertise in modern construction systems and worked with SIPs Industries to deliver this thermally efficient new dwelling, complete with an open-plan layout and stunning vaulted areas. The SIPs kit took just 15 days to fabricate and a further 15 to erect on site. It's finished in a bold mix of stone, timber and blackened metal cladding. **(www.sipsindustries.com)**





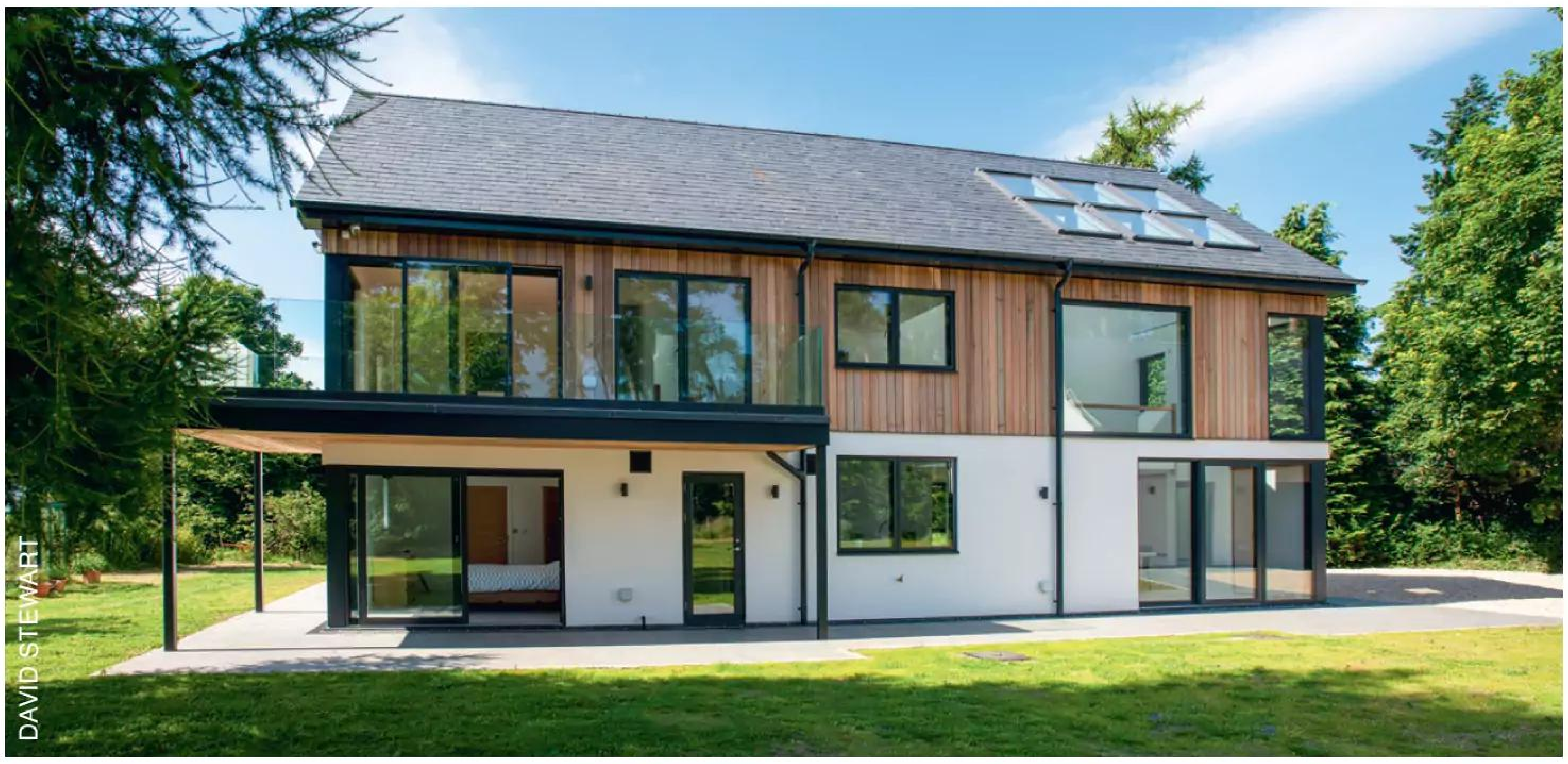
◀ FLINT & STEEL FINISH

Traditional random stone walling has a naturally uneven profile, so it's usually laid against a backing block to maintain a stable cavity. But this increases wall thickness and requires more wet-trade work, making full-house coverage less common. For this project, the owners instead specified flint cladding, with steel details on a timber frame superstructure to get the look while delivering a speedy build. The ultra-low-energy property incorporates Timber Innovations' Passiv Innovations system with a striking mix of flint and steel cladding for a bold, modern finish. **(www.timberinnovations.co.uk)**



▲ BRICK & RENDER BEAUTY

A stylish brick blend combines with crisp white render and a stunning oak-and-glass feature wall, alongside a characterful roof tile blend, in this gorgeous new manor house. Set back to one side is a spacious room-over garage, which is clad in timber to help differentiate it from the main dwelling. This contemporary classic was designed by Pete Tonks (www.pjtesign.co.uk) and realised using Oakwrights' oak frame and WrightWall Natural encapsulation system. **(www.oakwrights.co.uk)**



▲ DEFINING STOREYS

Designed by Lapd Architects (www.lapdarchitects.co.uk), this stylish home is clad in cedar and a soft, off-white acrylic render to provide a modern yet contextual finish in its wooded countryside plot. At the rear of the house, this mix of external finishes defines the ground and first floors, while a slate roof completes the look. The superstructure, which includes 180mm-thick insulation, was manufactured and erected by FrameWork Synergies. It went up on site in just two weeks, ready for the Idealcomi windows and glazed doors to be installed. **(www.fwsl.co.uk)**

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McVeigh Offsite	mcveighoffsite.com	✓ Gold
Mitek Industries	mitek.co.uk	✓ Gold
Paramount Structures	paramountse.co.uk	✓ Gold
Scotframe	scotframe.co.uk	✓ Gold
Shire Timber Group	shiretimbergroup.co.uk	✓ Gold

KINGSPAN TIMBER SOLUTIONS

KTS

Timber frame and SIPs specialists. Discover the Kingspan ULTIMA timber frame build systems and Kingspan TEK range and build towards an energy-efficient home. Offering thermal performance, with technical support and a dedicated contracts manager. Send us your architectural drawings for a FREE quote, we won't be beaten on a like-for-like quote.

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Tel: 01767 676400
Web: kingspantimbersolutions.co.uk

TIMBER INNOVATIONS

TIMBER INNOVATIONS

Timber Innovations design, manufacture and install precision-engineered Timber Frame and SIPs structures for self-build and commercial projects. As a Kingspan TEK® delivery partner, we deliver sustainable, energy-efficient solutions including Passivhaus and near-zero energy builds. Award-winning specialists, bespoke designs and wrap-around support from concept to completion.

STA ASSUREGOLD

Tel: 0121 314 7735
Web: timberinnovations.co.uk

*The STA members listed here offer a choice of multiple timber systems for your project (including the likes of timber frame, SIPs and Oak Frame)

OAK FRAME

OAKWRIGHTS

For 25 years, award-winning oak frame supplier Oakwrights has designed and built oak frame homes, extensions, and outbuildings. They understand that building a home is a unique experience. Whether you envision a country cottage or contemporary design, Oakwrights turn dreams into reality with planning-approved designs and hand-finished oak frames.

Tel: 01432 353 353
Web: oakwrights.co.uk

PROFESSIONAL SERVICES

Alcock Lees Partnership	alcock-lees.co.uk	**✔ Gold**
Bernard Sims Associates	bernardsimsassociates	
BLP Insurance	blpinsurance.com	
Elecosoft	elecosoft.com	
Thomas Carter	thomascarter.co.uk	**✔ Bronze**

BUILDSTORE

With a timber frame system, you must pay the manufacturer before it is delivered to your site; however, traditional mortgages provide funds after each stage of the build. BuildStore's advance stage payment mortgages offer guaranteed funds – up to 90% of the cost of your frame before it has been installed.

Tel: 0345 223 4888
Web: buildstore.co.uk

PROTEK GROUP

A loss can literally stop your project in its tracks. This is why site insurance is so important. Changes in the Defective Premises Act have wide consequence for anyone building or renovating. That is why mortgage lenders insist on a 10-year structural warranty.Get it covered with Protek. We understand timber frame!

Tel: 0333 456 8030
Web: protekselfbuild.co.uk

SELF-BUILD ZONE

Self-Build Zone is the market leading provider for self-build insurance in the UK. Offering Site Insurance, Structural Warranties and Site Surveys. Site Insurance covers you from the moment you purchase a plot up to completion. Structural Warranties are approved by the majority of lenders in the UK and backed by a 'A' rated insurer.

Tel: 0345 230 9874
Web: selfbuildzone.com

SIPS

Point1 Building Systems	point1buildingsystems.com	**✔ Gold**
SIP Building Systems	sipbuildingsystems.co.uk	**✔ Silver**
SIPs Industries	sipsindustries.com	**✔ Silver**
Timber Innovations	timberinnovations.co.uk	**✔ Gold**

GLOSFORD SIPS

Glosford SIPs is a market leading UK specialist, offering a complete service for your structural insulated building envelope. Using renowned Kingspan TEK panels our 'fabric first' solution guarantees low running costs for your new home. Our facilities include state of the art CNC manufacturing equipment, ensuring reduced processing time and a predictable build programme.

Tel: 01432 842999
Web: glosfordsips.co.uk

JML SIPS

JML SIPs is an award-winning, family business specialising in building with Structural Insulated Panels (SIPs), an energy-efficient housing construction method. We are committed to high quality and the delivery of excellent customer service every time and service clients UK-wide.

Tel: 01764 663271
Web: jmlsips.co.uk

SIPCO

SIPCO is a leading award-winning UK SIP company, completing projects with developers like BAM and Morgan Sindall. Our Structural Insulated Panels meet strict Building Regulations, BREEAM, and Passivhaus standards. We provide tailored SIP design, manufacture, supply, and installation services.

Tel: 0151 424 5346
Web: thesipcompany.com

SIPS@CLAYS

SIPS@Clays is the UK's leading provider of Structural Insulated Panels (SIPs). With over 20 years in business, we are the original Kingspan TEK® Building System delivery partner, designing, fabricating and installing SIPs projects nationwide. With everything under one roof, we provide an end-to-end service worthy of our STA Assure Gold status.

Tel: 01756 799498
Web: clays.com

SIPS ECO PANELS

As the UK's largest independent Structural Insulated Panel (SIP) company, we manufacture affordable energy-efficient homes, designing, manufacturing and installing our SIP Kits across the UK and Europe. So, whether you're looking for help designing your dream home, or efficiently erecting properties, the chances are we can help.

Tel: 01592 631636
Web: sipsecopanels.co.uk

TIMBER FRAME

Alexanders Timber Design	alexanderstimberdesign.co.uk	✓ Gold
Bartram	bartram.co.uk	✓ Gold
BE Timber	betimberframe.co.uk	✓ Silver
Core Timber Systems	core-timber-systems-ltd.business.site	✓ Gold
Craiglea Timber Frame	craigleatimberframes.co.uk	✓ Gold
Daniels & Vincent	danielsandvincent.co.uk	✓ Silver
Deeside Timber Frame	deesidetimberframe.com	✓ Gold
DG Timber Solutions	dgtimbersolutions.co.uk	✓ Gold
Donaldson Timber Engineering	donaldsontimbersystems.com	✓ Gold

CRENDON TIMBER

Crendon
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For over 55 years we've been at the forefront in the design and manufacture of engineered timber products. We're constantly working with customers to create new levels of on-site efficiency, exceptional service and innovative thinking. From project inception to completion, we provide cost-effective timber engineering solutions to enhance the quality, safety and speed of construction.

STA ASSUREGOLD

Tel: 01844 201020
Web: crendon.co.uk

Fasthouse	fast-house.co.uk	✓ Gold
Fleming Buildings	flemingbuild.com	✓ Gold
Frame Work Synergies	fwsl.co.uk	
FRC Timber Frames	frctimberframes.co.uk	✓ Gold
FREDS Timberframe	fredstimber.co.uk	✓ Gold
Inspire Timber Systems	inspiretimbersystems.co.uk	✓ Silver
Kestrel Timber Frame	kestreltimberframe.co.uk	✓ Gold
Leadon Timber Frame	leadontimberframe.com	✓ Gold
Merronbrook	merronbrook.co.uk	✓ Silver
Merlin Timber Frame	merlintimberframe.co.uk	✓ Gold
MTE Timber Frame	mte-leicester.co.uk	✓ Gold
Norscot Joinery	norscot.co.uk	✓ Gold
Oakworth Homes	oakworthtimberengineering.co.uk	✓ Gold
OFP Timber Framed Homes	ofptimberframe.com	✓ Gold
Premier Timber Systems	premiertimbersystems.co.uk	✓ Gold
PYC Construction	pycconstruction.co.uk	✓ Silver
Rob Roy Homes	robroyhomes.co.uk	✓ Silver
Robertson Timber Engineering	robertson.co.uk	✓ Gold
Roe Timber Frame LTD	Roeltd.co.uk	✓ Gold
SticX	sticx.co.uk	✓ Gold
Sydenhams	sydenhams.co.uk	✓ Gold
Target Timber Systems	targettimber.com	✓ Gold

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Fleming Homes

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Tel: 01361 883785
Web: fleminghomes.co.uk

FRAME TECHNOLOGIES

FRAME TECHNOLOGIES
SELF-BUILD TIMBER FRAME

Frame Technologies specialises in creating bespoke structural timber systems for exceptional, energy-efficient homes. With 20+ years of experience in the timber industry, we pride ourselves on our expert technical guidance and friendly, approachable team. Services include self build timber frame structures, timber technology, technical processes, and technical support.

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Tel: 01544 267 124
Web: frametechnologies.co.uk

HARMONY TIMBER UK

Harmony Timber UK is proud of it's reputation within the timber frame industry as both practitioners and innovators, supporting developers, self-builders and specialist builders. We continue to grow and deliver high quality products and services. Our flexibility and ability to adapt to different requirements, difficult builds and changes to legislation makes us the perfect choice for all your timber frame needs.

STA ASSUREGOLD

Tel: 01227 209087 / 01227 712322
Web: harmonytimber.co.uk

LAKELAND TIMBER FRAME

We combine high quality craftsmanship and attention to detail with the latest developments in technology to provide timber framed homes and buildings for the 21st century. Contact us to find out how we can offer you practical, value for money timber frame construction solutions to suit your project and your budget.

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Tel: 01524 782596
Web: lakelandtimberframe.co.uk

LOWFIELD TIMBER FRAMES

We supply structural timber solutions – including Timber Frame, Glulam, and Oak, to the construction industry. As a high adaptable, sustainability-focused business, we support Net Zero goals and lead in Passivhaus design. We collaborate closely with clients to deliver the best outcomes for every build.

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Tel: 01743 891922
Web: lowfieldtimberframes.co.uk

MBC TIMBER FRAME

MBC Timber Frame are an offsite manufacturer of high performance timber frame systems. From our Passive timber frame and foundation system to our standard timber frame system we have created a series of options that work for all projects.

STA ASSUREGOLD

Tel: 01452 346499
Web: mbctimberframe.co.uk

TURNER TIMBER FRAMES

TTF are a family firm with 4 decades of Timber Frame experience. Quality, value and service are at the core of everything we do. Offering a national supply and erection TTF will work with you to turn your dream home in to reality. Factory tour and overnight Timber Frame stays now being booked for our show home site.

STA ASSUREGOLD

Tel: 01482 218945
Web: turnertimber.co.uk

WYCKHAM BLACKWELL

Wyckham Blackwell are timber engineering specialists with 140 years' heritage. Established in 1884, we understand how timber engineered products save time and money. Our in-house designers and CE-certified manufacturing facilities deliver quality from inception to completion, making us one of the UK's largest independent timber engineering companies.

Tel: 01675 442233
Web: wyckhamblackwell.co.uk

Taylor Lane Timber Frame	taylor-lane.co.uk	✓ Gold
Timber Tight	timbertight.com	✓ Gold
UK Structures	ukstructures.com	
Walker Timber Engineering Hixon	walkertimberengineering.com	✓ Gold
Wales Timber Solutions	walestimbersolutions.co.uk	

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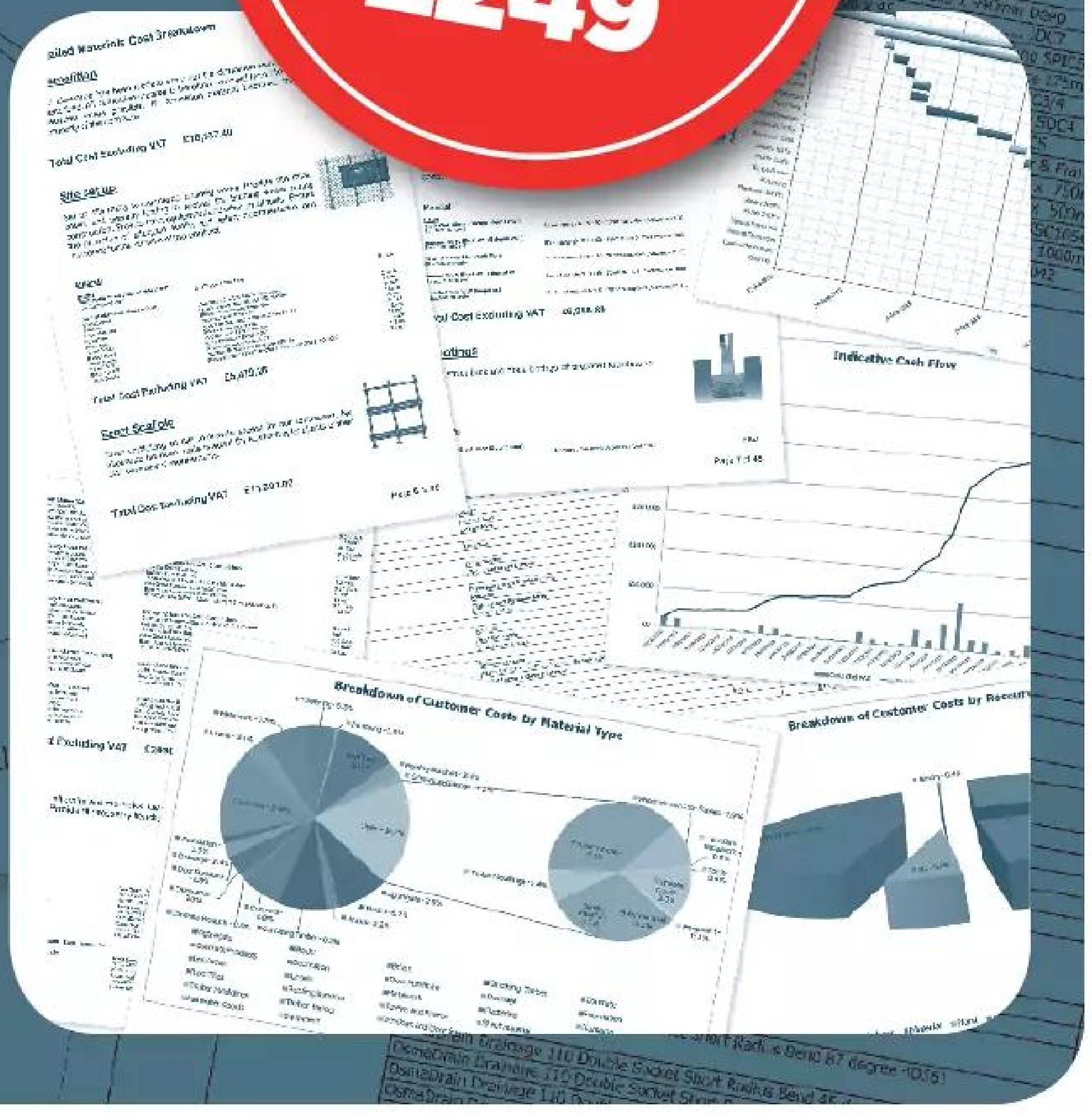

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